

## GENDER-RELATED INDIVIDUAL DIFFERENCES

### **Androgyny in dentists: The contribution of masculinity and femininity to mental health and well-being**

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**Background.** A dentist's professional activity requires a high level of personality traits that are usually regarded as a combination of both female and male traits. Androgynous gender identity corresponds to dentists' professional requirements and allows the dentists to retain mental stability and psychological well-being.

**Objective.** The goal of this study is to determine the specificity of the androgynous identity in dentists in the context of gender differences as indicators of mental health and subjective well-being.

**Design.** The first stage of the research covered 129 dentists of both sexes to reveal their androgynous gender type using the Bem Sex Role Inventory. During the second stage, 117 androgynous dentists were studied using the SCL-90-R and Brief Subjective Well-being Questionnaire in an effort to reveal the specificity of the dentists' mental health and self-esteem.

**Results.** According to the results, individuals with an androgynous type of gender identity constitute the largest part of dentists (90.70%), regardless of their biological sex. The expression of masculinity does not statistically differ from the expression of femininity within the androgynous sample. Regardless of their sex, these dentists are characterized by a higher level of mental health. No significant differences were revealed between androgynous men and androgynous women in their subjective well-being indicators — self-estimation of health, satisfaction with material status and success motivation.

**Conclusion.** We concluded that androgyny is the most common type of gender identity in the men and women engaged in dentistry. The basic gender characteristic in the structure of androgynous identity in dentists is masculinity, which is closely interrelated with mental health and subjective well-being regardless of biological sex.

**Keywords:** gender identity, androgyny, masculinity, femininity, mental health, well-being, dentists

## Introduction

The research into gender issues at different levels of social interaction is one of the perspective scientific areas of psychology and sociology today (Kletsina, 2013). Gender research tends to be more and more significant not only in the sphere of the humanities, but also in medicine (Kovaleva & Barkovskaya, 2012).

Simultaneously, the growing interest in the category of gender and gender role is seen in clinical psychology, which is closely linked to medicine (Gartfelder & Nikolaev, 2015; Glidden, Bouman, Jones, & Arcelus, 2016). It is quite logical that it has many roots in Lev Vygotsky's ideas of cultural-and-historical approach, which can significantly contribute to the understanding of a great number of psychological phenomena of standard and pathological behaviour (Zinchenko & Pervichko, 2013; Tkhostov, 2016).

One of the basic categories of gender psychology is the concept of androgyny, according to which every person, regardless of whether that person is a man or a woman, combines both traditional and culturally determined feminine and masculine qualities, and a simultaneous identification of a person with either masculine or feminine qualities corresponds to their androgynous identity (Bem, 1974; Bem, 1985). According to a modern perception of androgyny, a person's masculine and feminine characteristics do not contrast each other; they complement each other, which ensures a wider variety of behaviour and better adaptation to the social environment (Lipińska-Grobelny, 2007).

Optimal manifestation of androgyny suggests a more adaptive, hence healthier, behaviour of a person regardless of their sex or age (Shimonaka, Nakazato, Kawaai, & Sato, 1997; Vafaei, Alvarad, Tomás, Muro, Martinez, & Zunzunegui, 2014), which may be associated with higher self-esteem in androgynous men and women. This also refers to more stable indicators of mental health in people of androgynous gender identity (Vafaei et al., 2014).

However, there is some ambiguity here. There are data pointing out that androgyny in elderly people is associated not only with better mental health, but also with better physical health and mobility (Vafaei et al., 2014). Another study revealed that only elderly androgynous women, as compared to their peers, reveal a higher level of general wellness and life satisfaction. Their male peers' wellness and physical activity are not affected by gender role (Gale-Ross, Baird, & Towson, 2009).

The role of androgyny tends to be less positive in reference to occupational stress. Androgynous men, along with masculine women and undifferentiated individuals, more often perceived their workplace as stressful (Lipińska-Grobelny, 2008). It was also established that androgyny in its pathological expression can be correlated with personality disorders, particularly with antisocial and borderline personality disorders (Howard, 2015).

Nonetheless, androgyny is considered an important psychoprotective factor, which may have a therapeutic effect if intentionally encouraged (Prakash, Kotwal, Ryal, Srivastava, Bhat, & Shashikumar, 2010).

Thereupon, the contribution of masculinity and femininity, as basic gender characteristics, to people's health and well-being is not so evident. There is an opinion that higher levels of both masculinity and femininity are associated with higher

levels of optimal mental health (Lefkowitz & Zeldow, 2006). However, what is the individual role of these gender characteristics?

Feminine characteristics are correlated with a person's increased susceptibility to stress and weaker health (Prakash et al., 2010). Femininity turned out to be the main trait of gender identity in patients with eating disorders (Behar, de la Barrera, & Michelotti, 2002). There are data speaking of the association of expressed masculinity with a high risk of somatic diseases (Juster & Lupien, 2012). In other words, the assessment of the role of masculine and feminine characteristics in people's health and well-being is not so obvious.

Dentistry is one of the career areas in which gender research proved to be significant. In the course of their daily work, dentists experience occupational stress (Mazharenko, 2012; Maslak, Naumova, & Filimonov, 2014). While still in university, some dentistry students reveal substandard psychological well-being (Chistopolskaya, Enikolopov, Ozol, Chubina, Nikolaev, & Gorodetskaya, 2016).

Some dentists tend to be more susceptible to anxiety and depression (Kulkarni, Dagli, Duraiswamy, Desai, Vyas, & Baroudi, 2016). Many of them have somatic diseases (Maslak et al., 2014; Bessonova, Shkatova, & Oksuzyan, 2016). Another consequence of stress is burnout (Mazharenko, 2012; Maslak et al., 2014; Vered, Zaken, Ovadia-Gonen, Mann, & Zini, 2014; Kulkarni et al., 2016). The most significant factors in the burnout experienced by dentists are younger age, male sex, high job strain, excessive working hours and certain personality characteristics (Singh, Aulak, Mangat, & Aulak, 2016). The risk of developing burnout in dentists is essentially reduced by high self-esteem (Vargina, 2007).

One of the activities that reduces the adverse effect of occupational stress on both male and female dentists is leadership. The key personality characteristics encouraging leadership in all people, including dentists, are a high-level of professionalism and strong ethics (Chambers, 2016). The number of such professionals is constantly growing. According to the American Dental Association, 40% of male and female dentists exercise their leadership in their local communities and 32% in their professional organisations (Forest, Taichman, & Inglehart, 2013).

Gender specificity of dentistry is reflected in its steady deviation from masculine dominance. Today, more and more women are working in dentistry (Whelton & Wardman, 2015). This phenomenon has been called the "feminization of dentistry". Having begun in North America, this process is eventually covering the whole world (McKay & Quiñonez, 2012). The number of female dentists in Russia actually exceeds the number of male dentists (Vargina, 2007; Maslak et al., 2014).

However, the process of feminization in dentistry may lead to certain changes that society and the dentists may not be ready to encounter (McKay & Quiñonez, 2012). It is not a secret that there are some differences concerning male and female dentists' work patterns and their attitudes towards work (Ayers, Thomson, Rich, & Newton, 2008; McKay & Quiñonez, 2012).

For example, male dentists work more hours per week than female dentists (Ayers et al., 2008). Men more often have their own practice (Ayers et al., 2008; McKay & Quiñonez, 2012). They study professional literature more often (Newton, Thorogood, & Gibbons, 2000) and are more willing to continue their education (Ayers et al., 2008). Male dentists show a higher career satisfaction score than female dentists (Ayers et al., 2008). However, male dentists are more susceptible

to occupational stress than women (Vargina, 2007). In their relationship with patients, male dentists are more reasonable, relying more on objectivity, logic and consistency. They show better control of their emotions. When dealing with male dentists, patients more often believe that a dentist expects the patient to be able to tolerate pain (McKay & Quiñonez, 2012). While working, male dentists run more risks due to not wearing protective gear (gloves, masks, eye shields) and hence get injured more often (McKay & Quiñonez, 2012).

Female dentists more often work part time (Newton et al., 2000; McKay & Quiñonez, 2012) employed on salary or as an associate in a private practice (Ayers et al., 2008; McKay & Quiñonez, 2012). Female dentists have a lower average yearly income than men (McKay & Quiñonez, 2012). They take more career breaks than men, and their career breaks are much longer and largely accounted for by child rearing (Newton et al., 2000). Female dentists experience higher strain than men, but their job burnout is developing more slowly (Vargina, 2007). Female dentists admit the men's leading role in dentistry; however, they do not regard it as optimal (Vargina, 2007). In their relationship with patients, female dentists reveal more empathy and communicative skills. They are more caring, humane and tactful, and they aim for harmony. In decision-making, they tend to rely on feelings (McKay & Quiñonez, 2012). Female dentists are sure that they have a better, deeper understanding of their patients and a greater ability to empathize as compared to male dentists, and they believe that their patients put more trust in them than in male dentists (Vargina, 2012). When working, female dentists adhere to conservative practice more — they are more inclined to restorative and preventive approaches in treatment, especially at the initial stage of their work (McKay & Quiñonez, 2012).

To summarize, it is worth noting that the professional activity of a dentist is very stressful, causing extreme mental strain, and, therefore, requires a strong personality. These requirements are correlated with some characteristics that are regarded as either female (responsiveness, cordiality, empathy, communicability, etc.) or male (determination, ability to work in a highly competitive environment and quickly master new professional technologies, etc). It is not surprising that gender identity plays a very important role in a dentist's prospective professional activity, determining the choice of not only a profession, but also a certain dental specialty, where the main role is played by the type of an applicant's gender identity along with their personality traits (Kim, Kim, & Moon, 2015).

Therefore, the results of the conducted review assume that the gender identity associated with androgyny will prevail in dentists, regardless of the feminization in dentistry, since, on the one hand, androgyny corresponds more to the professional requirements, and on the other hand, it allows the dentists to retain mental stability and psychological well-being.

At the same time, it is not clear what psychological qualities underlie a higher level of mental health and well-being in male and female androgynous dentists. That is exactly the reason why the ultimate *goal* of our research is to study the specificity of androgynous identity in dentists in the frame of gender differences in the indicators of mental health and well-being. Under androgynous gender identity within this research, we mean a high level of acceptance by a person of being not one sex-type gender identity, but having both masculine and feminine qualities.

## Method

### *Study design and participants*

This research was conducted in two stages involving all the dentists who had taken the qualification programme course at the Medical Faculty of the Chuvash State University throughout 2016.

Prior to the research, each respondent received an explanation of the study and its goal in an initial interview with all of the respondents approving their participation in the study. Subsequently, the respondents completed the printed questionnaires that were offered to them in their free time. Based on the results, another interview was held with the respondents aimed at clarifying the obtained results and correlating them with certain characteristics.

The first stage of the research covered 129 dentists (64 males and 65 females) with their mean age of  $30.95 \pm 6.99$ . At this stage, the goal was to reveal androgynous dentists.

The second stage of the experiment included 117 dentists (59 males and 58 females) with their mean age of  $30.86 \pm 6.80$ . The goal was to find out the specificity of their mental health and self-esteem according to certain parameters.

Because it was difficult to statistically compare the number of both sex respondents working in each dental specialty (therapeutic dentistry, surgical dentistry, orthopedic dentistry, orthodontics, pediatric dentistry, etc.), the research disregarded the factor of the dentists belonging to a certain professional area.

### *Research methods*

Personality gender characteristics were revealed using a *Bem Sex Role Inventory (BSRI)*, which is the most commonly used tool for conducting similar research across countries and age groups (Vafaei, Alvarad, Tomás, Muro, Martinez, & Zunzunegui, 2014). In this research, the *BSRI* perfectly suited the task of revealing the extent of expression of androgynous personality traits, and had the ability to demonstrate feminine and masculine qualities in different real-life situations (Bem, 1974). The Russian analogue of *BSRI* (Lopukhova, 2013) revealed the extent of femininity and masculinity expressed in each of the respondents. A certain correlation of these traits made it possible to diagnose one of the four types of gender identity — masculine, feminine, androgynous or undifferentiated.

The *SCL-90-R Symptomatic Questionnaire* (Derogatis, 1994), which is widely used in clinical and healthy samples, helped assess the level of mental health of the respondents. It was possible to detect common mental disorders in the respondents and identify the intensity of their expression — manifestation of somatization, obsession, interpersonal sensitivity, depression, anxiety, hostility, phobias, paranoid ideations or psychoticism. Summed up, the indicators of certain scales helped calculate the integral indexes of the state gravity, distress and the total number of pathological manifestations. The picture of the respondent's mental health was completed by using seven additional *ADD* questions (Tarabrina, 2001).

All the respondents were also offered a *Brief Subjective Well-being Questionnaire*, which was based on the *Sociocultural Questionnaire* (Nikolaev, 2006) and comprised three questions on self-estimation of physical health, material well-being satisfaction, and achievement motivation. The first question asked a respondent to self-

estimate their own current health by choosing one of the following answers: incurably ill, desperately ill, ill as many people around, rarely ill, having temporary health problems, generally healthy or absolutely healthy. The second question asked them to estimate their own material status. A respondent was to choose one of the three possible answers: I lack money for my basic essentials; I have enough money, but I would like to have more or I am fully satisfied with my material status. The third question concerned achievement of success. The respondents were asked to choose from the following answers: I do not think about success, I am not sure I can be successful, I am trying to become successful or I will necessarily achieve success. Regarding the increasing value of each answer's content they were assigned a number of points corresponding to the sequence number of the answer on the questionnaire. The research did not calculate the integral quantitative score as each question was assessed separately. Presumably, the answers to the questionnaire reflected one of the aspects of well-being — physical, material or associated with success.

### **Statistical analysis**

The primary statistical analysis was aimed on calculating the number of cases, arithmetic average and standard deviation for discrete indexes, percentage ratio for category indexes. Considering that most of the obtained results allowed us to define the value corresponding to normal distribution, *Student's t*-criterion was calculated to assess the validity of the differences with confidence level  $p < .05$  and  $p < .01$ . To compare the indexes distribution among groups, the value of *chi-square* ( $\chi^2$ ) criterion was defined. To reveal valid interconnections between the indexes, *Pearson's linear correlation r-coefficient* was calculated with confidence level  $p < .05$ .

All the calculations were done with the help of Microsoft Office Excel 2010 and special GNU CRAN R 3.3.2 software.

## **Results**

### **Results of gender identity indicators analysis**

The analysis of the gender identity structure in the first sample of dentists (129 people), made by using the *BSRI* at the first stage of the research, revealed that the majority of the respondents (117 people, 90.70 %) are correlated with the androgynous type of gender identity. The remaining 12 people (9.30 %) corresponded to gender characteristics of feminine (10 people), masculine (1 person) and undifferentiated (1 person) types (Table 1). Also, the male (50.43 %) and female (49.57 %) dentists are equally represented ( $p > .05$ ) within the group of androgynous dentists.

Thus, the empirical finding of the research done during the first stage of the study establishes that individuals with an androgynous gender identity type constitute the largest part of dentists regardless of their sex.

Based on these data and aimed to achieve the goal of the given research, 59 male and 58 female androgynous dentists were selected into the second sample group (117 people), which will further be referred to as the androgynous sample.

This stage of research allowed us to reveal the indicators of masculinity and femininity in the whole sample of androgynous respondents, as well as the diffe-

**Table 1.** Structure of gender identity types in the first sample (n = 129)

Sex	Type of Gender Identity				Total
	Masculine	Feminine	Androgynous	Undifferentiated	
Male	1	3	59	1	64
Female	-	7	58	-	65
Total	1	10	117	1	129

rences regarding the sex factor (Table 2). Thus, the results showed that the expression of masculinity does not statistically differ from the expression of femininity within the androgynous sample ( $t = .50$ ;  $p = .62$ ). At the same time, the separate sex analysis showed that androgynous women revealed a stronger expression of feminine characteristics ( $t = 6.15$ ;  $p = .00$ ), whereas androgynous men revealed a stronger expression of masculine traits ( $t = 3.53$ ;  $p = .00$ ). On the one hand, the findings can be regarded as quite logical because of equal representation of men and women in the sample. On the other hand, they may be reflecting some differences in the proportion of androgynous characteristics in men and women, the interrelation of which with certain indicators of the respondents' mental health is specified in further research.

**Table 2.** Indicators of masculinity and femininity in the second sample (n = 117)

Respondents	N of people	Masculinity	Femininity	t	p
Second sample including:	117	$7.62 \pm 4.38$	$7.89 \pm 3.79$	.50	.62
Men	59	$9.08 \pm 4.50$	$5.73 \pm 2.99$	3.53	.00
Women	58	$6.12 \pm 3.72$	$10.09 \pm 3.21$	6.15	.00

A second look at Table 2 shows that with respect to the value of Student's criterion (3.53 vs 6.15), the discrepancy between mean values of masculinity and femininity in men is significantly less than the similar discrepancy in women (9.08 and 5.73 vs 6.12 and 10.09). To our mind, it may reflect a greater polarity of masculine and feminine gender traits in androgynous women. In androgynous men, it can speak of greater smoothness of transition from the masculine gender role to the feminine one.

**Table 3.** Indicators of masculinity and femininity in men and women

Indicators	Men, n = 59	Women, n = 58	t	p
Masculinity	$9.08 \pm 4.50$	$6.12 \pm 3.72$	3.89	.00
Femininity	$5.73 \pm 2.99$	$10.09 \pm 3.21$	7.59	.00

The analysis of mean values of masculinity and femininity in male and female respondents (Table 3) also revealed similar differences with respect to the value of Student's criterion (3.89 vs 7.59). It is evident that a greater discrepancy in these

values in men and women is obviously seen on the femininity scale (5.73 и 10.09). This finding can serve as testimony that feminine traits are expressed in an androgynous personality more obviously than masculine characteristics.

### **Results of mental health indicators analysis**

Based on the analysis of availability and manifestation of psychopathological symptoms and with the goal to identify the state of the respondents' mental health, we compared the results obtained in the androgynous sample by means of the *SCL-90-R* method with similar standard measurement data. Standard measurement data have been obtained after studying the sample of healthy people of both sexes in the course of adaptation of the *SCL-90-R* method in Russia (Tarabrina, 2001).

When compared to women, the male respondents have lower indicators on the scales of somatization ( $p = .00$ ), depression ( $p = .00$ ), interpersonal sensitivity ( $p = .00$ ) and anxiety ( $p = .01$ ). In other words, androgynous men feel less concerned about their somatic health; they are more oriented towards productive communication, more interested in life, more vigorous, calm and self-confident.

The comparison of general distress indexes obtained by means of the *SCL-90-R* method generally characterizes the sample as having a high level of mental health (Table 4). Thus, all the three general *SCL-90-R* indexes have reliably lower values as compared to the standard group ( $p < .01$ ). All this statistically confirms that, even as compared to the standard, androgynous dentists reveal a minimal number of symptoms (PST) and intensity of pathological symptoms (GSI), have a weak expression of personality symptomatic distress and lack motivation for overestimation and disguise of the available symptoms (PSDI).

A deeper analysis of the results on major *SCL-90-R* scales helped identify the psychological characteristics that ensure a high level of mental stability in androgynous dentists (Table 5). First, they include a statistically lower level ( $p = .00$ ) of interpersonal sensitivity, depression, hostility and phobic anxiety. Overall, it characterizes the respondents as people who are sufficiently balanced, friendly and open, but also highly motivated, vigorous, reasonable and greatly interested in life and communication.

**Table 4.** General *SCL-90-R* distress indexes in androgynous sample as compared to the standard

General distress indexes	Androgynous sample, n= 117	Standard, n= 500	t	p
GSI	.52 ± .45	.64 ± .43	2.74	.01
PSDI	1.34 ± .37	1.45 ± .39	2.72	.01
PST	31.15 ± 20.08	36.64 ± 17.28	3.00	.00

What type of gender constituent may be characteristic for such indicators of the androgynous respondents' mental health? Whose psychic and emotional state is more stable — men's or women's? To answer these questions, it is necessary to look into the data of Table 6. According to the results, androgynous men have a lower global severity index GSI ( $p = .00$ ) score and a fewer number of positive an-

swers concerning the availability of certain pathological symptoms PST ( $p = .00$ ) than androgynous women do. However, the level of symptomatic distress (PSDI) in the given subgroups is equally low ( $p = .08$ ).

**Table 5.** Indicators of major *SCL-90-R* scales in androgynous sample as compared to the standard

Scales	Androgynous Sample, n=117	Standard, n=500	t	p
Somatization (SOM)	.57 ± .53	.55 ± .46	.40	.69
Signs of Obsession and Compulsion (O-C)	.75 ± .58	.78 ± .54	.53	.60
Interpersonal Sensitivity (INT)	.67 ± .57	.95 ± .65	4.35	.00
Depression (DEP)	.52 ± .52	.72 ± .55	3.55	.00
Anxiety (ANX)	.48 ± .52	.58 ± .53	1.76	.08
Hostility (HOS)	.49 ± .57	.74 ± .65	3.85	.00
Phobic Anxiety (PHOB)	.19 ± .37	.32 ± .37	3.37	.00
Paranoid Ideation (PAR)	.59 ± .51	.73 ± .59	2.30	.02
Psychoticism (PSY)	.35 ± .52	.44 ± .45	1.96	.05
Additional questions (ADD)	.48 ± .53	.43 ± .33	1.41	.16

**Table 6.** General distress indexes based on the *SCL-90-R* in men and women

General distress indexes	Men, n = 59	Women, n = 58	t	p
GSI	.42 ± .39	.62 ± .48	2.52	.01
PSDI	1.28 ± .35	1.40 ± .38	1.76	.08
PST	26.29 ± 17.05	36.09 ± 21.81	2.71	.01

**Table 7.** Major scales indicators based on the *SCL-90-R* in men and women

Scales	Men, n = 59	Women, n = 58	t	p
Somatization (SOM)	.39 ± .35	.75 ± .62	3.89	.00
Signs of Obsession and Compulsion (O-C)	.68 ± .55	.82 ± .60	1.37	.17
Interpersonal Sensitivity (INT)	.52 ± .44	.82 ± .65	2.89	.00
Depression (DEP)	.35 ± .39	.69 ± .58	3.69	.00
Anxiety (ANX)	.37 ± .42	.61 ± .58	2.57	.01
Hostility (HOS)	.49 ± .61	.49 ± .52	.05	.96
Phobic Anxiety (PHOB)	.16 ± .42	.22 ± .33	.79	.43
Paranoid Ideation (PAR)	.53 ± .50	.66 ± .52	1.47	.15
Psychoticism (PSY)	.30 ± .56	.40 ± .48	1.03	.30
Additional questions (ADD)	.42 ± .54	.55 ± .52	1.25	.22

The analysis of additional questions based on the SCL-90-R also turned out to be very useful. As shown in Table 5, the mean indicator of ADD questions in the androgynous sample does not differ from its standard value ( $p = .16$ ). Neither does this indicator differ in men's and women's subgroups ( $p = .22$ ) (Table 7). However, according to the analysis of the ADD scale structure, women revealed indicators of reliably higher ( $p = .00$ ) values in that they have difficulty falling asleep (Question 44). This symptom was typical for more than half of the female respondents (60.34 %).

### ***Results of subjective well-being analysis***

The analysis of the answers given by the androgynous respondents to the Brief Questionnaire on Subjective Well-being showed that the majority of the dentists (52.99 %) assess their health positively (generally healthy; absolutely healthy). As for the material status, only a third of the respondents were satisfied with their material status (38.46 %). Most of the dentists are sure that although they have enough money for their current lifestyle, their unrealized needs are still much higher (58.12 %). This is the factor that may be associated with the deliberate motivation towards success shown by more than half of the respondents (53.91 %). Although the other part of the respondents (43.48 %) are absolutely confident that they will actually achieve their lofty goals, which they associate with their achievement.

The comparative analysis of the questionnaire results based on sex revealed no valid difference between androgynous men and androgynous women concerning their subjective well-being indicators — self-estimation of their health ( $\chi^2 = 1.08$ ;  $p = .58$ ), satisfaction with their material status ( $\chi^2 = 9.53$ ;  $p = .09$ ), achievement motivation ( $\chi^2 = 4.65$ ;  $p = .10$ ).

### ***Results of correlation analysis***

A correlation analysis of the results obtained during the research was made to specify the character of the correlation of the androgynous sample respondents' gender identity indicators with their mental health and some other parameters of their self-estimation — separately for men and for women. The analysis made use of statistically significant data with confidence level  $p < .05$ .

*Common characteristics of correlations in men and women.* It was found out that both male and female respondents have the following common intercorrelations:

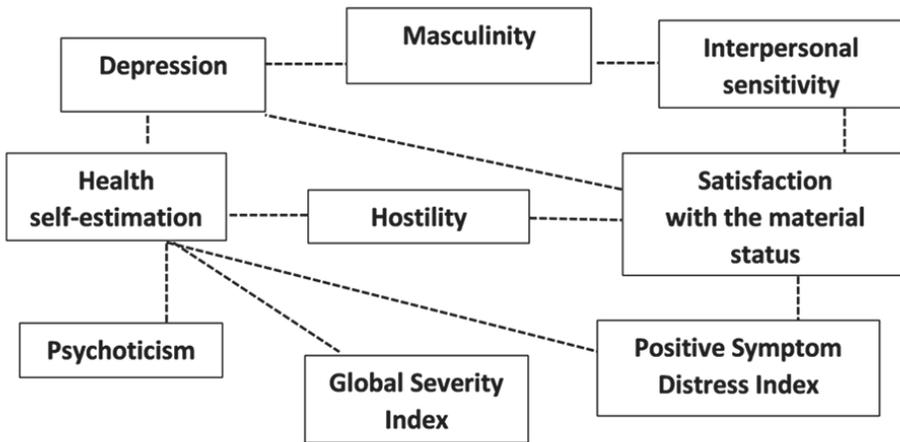
- inverse interrelations between masculinity and depression and interpersonal sensitivity;
- indirect inverse interrelations between masculinity and the GSI global severity index, PSDI positive symptom distress index and health self-estimation; and
- inverse interrelations between depression and health self-estimation.

Thus, it has been established that masculinity, as one of the basic constituents of gender identity, is a universal psychological characteristic of the dentists, which is involved in forming important interrelations typical for androgynous men and women. Particularly, it is characteristic for all of them that a stronger expression of masculinity correlates with a decrease in the signs of depression and interpersonal

sensitivity. Indirectly, their health self-estimation will be more positive and their general state of mental health higher. Thus, it can be pointed out that a higher level of masculinity in androgynous dentists, regardless of their sex, is accompanied by better mental health, more emotional stability, more confidence in their health and more pragmatism in communication, which creates the necessary conditions for successful professional activity.

The analysis of correlations of masculinity made separately for male and female dentists revealed the following.

*The specificity of masculinity correlations in male dentists.* As it may be seen in Fig.1, masculinity in androgynous male respondents is directly related to only two psychological categories — depression ( $r = -.28$ ) and interpersonal sensitivity ( $r = -.27$ ). Thus, the generic scheme described above will be fully repeated in the behaviour of male dentists. However, here it will be complemented by indirect inverse interrelation between depression and interpersonal sensitivity via satisfaction with their material status ( $r = -.26$  and  $r = -.29$ ), which is typical only of men.



----- inverse correlation with confidence level  $p < .05$

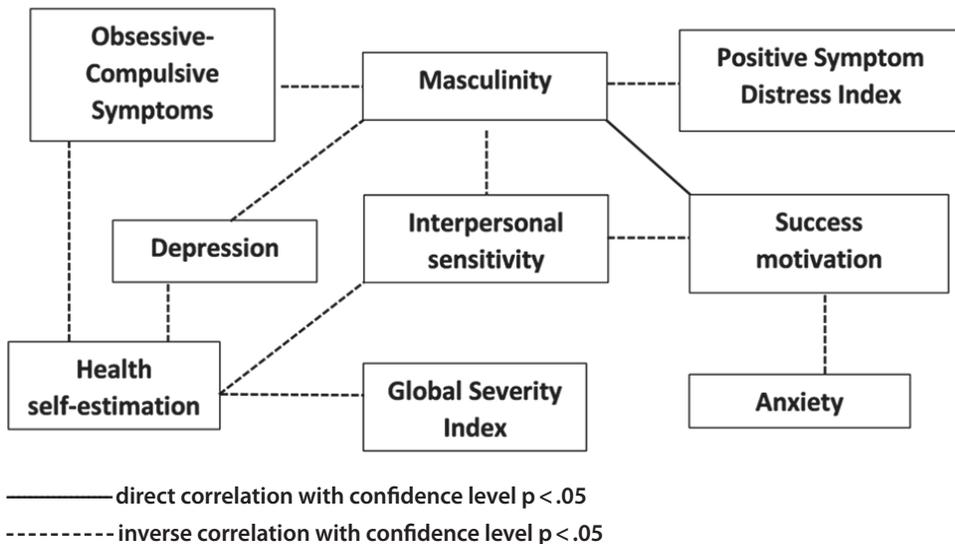
**Figure 1.** Correlations of masculinity in male dentists

Figure 1 obviously shows that the most specific elements of masculinity interrelations in men are hostility, psychoticism and satisfaction with their own material status. All these are interrelated with masculinity indirectly via health self-estimation ( $r = -.34$ ), depression ( $r = -.28$ ) and interpersonal sensitivity ( $r = -.27$ ).

Overall, the key psychological characteristics with the largest number of valuable correlations are *health self-estimation* (five interconnections), *satisfaction with the material status* (three connections) and, linked to them, *depression* (three connections). Based on this, it can be assumed that a higher level of masculinity in androgynous male dentists is accompanied by a more stable emotional mood and an appropriate positive self-estimation of their health with minimal value indicators of psychological ill-being. In its turn, a higher level of satisfaction with material status is correlated in them with reduced alertness and hostility in communication with people, which reflects growing stability of their mood and positive self-estimation of their health.

It is worth noting that if higher satisfaction with material status and higher predictability and adequacy of their behaviour completely correspond to a higher level of masculinity in androgynous men, reduced hostility in more masculine men may seem to be quite unexpected, as it is quite contrary to the image of traditional masculinity. We connect this discrepancy with the fact that high competition in dentistry can force male dentists to deliberately control their aggressive impulses, which leads, in this case, to a general reduction of hostility.

*The specificity of masculinity correlations in female dentists.* Masculinity in androgynous female dentists is indirectly interrelated to more than twice as many psychological variables than in men (Figure 2). A higher level of masculinity in females will be accompanied by not only low indicators of depression ( $r = -.30$ ) and interpersonal sensitivity ( $r = -.33$ ) as mentioned above, but also by weaker signs of obsession and compulsion ( $r = -.26$ ), lower PSDI index ( $r = -.29$ ) scores and a growth in success motivation ( $r = .30$ ).



**Figure 2.** Correlations of masculinity in female dentists

The most specific elements of interrelations of masculinity in women are signs of obsession and compulsion ( $r = -.32$ ), self-estimation of their successfulness ( $r = .30$ ) and, interrelated with it, anxiety ( $r = -.27$ ). The key psychological categories with the maximum number of significant correlations in the given system are *health self-estimation* (four connections), *success motivation* (three connections) and *interpersonal sensitivity* (three connections), linking the two previous categories.

Thus, higher masculinity in a female dentist makes her more motivated towards success, less anxious, more confident and less inclined to depression and obsession. In this case, she will also over- or underestimate the available symptoms less, and, like male dentists, she will be less geared to the emotional side of interpersonal relations. Correspondingly, a higher level of masculinity in androgynous female dentists is correlated with minimal psychopathological manifestations correspond-

ing to a higher self-estimation of their health. Reduced anxiety in such situations is correlated with pragmatic interpersonal communication and more confidence in achieving success.

## Discussion

The research of the specificity of the androgynous identity in dentists produced interesting and unexpected results. It was found that the androgynous identity is common among primarily tested dentists regardless of their sex. It is the dominating type of gender identity that is characteristic of nine out of ten dentists, which revealed that the expression of masculinity organically complemented with the feminine traits.

This is the fact that explains the high level of mental health in the androgynous sample. The study results fully correspond to the data showing that the androgynous model of gender identity may be regarded as a distinctive indicator of an optimal level of mental health, as one of its unconditional determinants (Vafaei et al., 2014), which stays actual in its value throughout the life span of a person (Shimonaka et al., 1997).

When speaking of the correlation between gender identity and mental health, it is necessary to remember that, in similar research, scientists often take into account the factor of sexual identity, which is closely interconnected with the gender factor. And this is exactly the reason that we can explain the lack of correspondence of the results obtained in our research to the data of other researchers. For example, the study of women belonging to a sexual minority group did not reveal any interconnection between gender identity and mental health indicators (Levitt, Puckett, Ippolito, & Horne, 2012).

On the other hand, the issue of personal identity can receive a broader consideration since the state of a person's mental health can be associated with not only the character of their personal identity, but also with their relationships with people whose gender and sexual identity differ from theirs. Thus, the formation of internalized heterosexism perceived as a negative attitude to the representatives of sexual minorities is directly related to psychological distress, with such people often being in need of psychological assistance (Puckett, Levitt, Horne, & Hayes-Skelton, 2015).

In reference to the governing role of masculinity in the structure of androgynous identity in dentists, it is worth noting that the results we obtained are similar to earlier research based on the study of military personnel (Dimitrovsky, Singer, & Yinon, 1989), which distinctly showed that men and women with a high level of masculinity have a higher self-esteem and higher assessment on the part of their colleagues concerning their achievement and suitability for army service.

Evidently, the categories of estimating health, material status and achievement, the indicators of which have been studied in dentists within the given research, can be regarded as important factors, which determine the system of masculinity interconnections within the context of androgynous identity. The comparison of the results obtained during our study of androgynous dentists, namely, the indicators of their health self-estimation and the extent of their satisfaction with their material status, with similar data revealed by Maslak et al. (2014), proved once again a

higher level of subjective well-being of the androgynous respondents. Our results not only confirm the idea that self-esteem and personal health are the most effective predictors of successful adaptation, but also significantly broaden this theory by revealing different systems of interconnections for men and women.

## **Conclusion**

Androgyny is the most common type of gender identity in men and women engaged in dentistry, and, in different contexts, it is revealed differently in representatives of the two biological sexes. Thus, as compared to androgynous male dentists, androgynous female dentists reveal a greater range of manifestation of masculine and feminine traits. The subjective estimation of well-being by androgynous male dentists shows higher mental stability, which is associated with a more obvious expression of their calmness, self-confidence, a greater interest in life, a reduced concern about their own health, sound sleep and an orientation towards productive communication.

At the same time, it is established that feminine traits are more obviously expressed in androgynous dentists, both men and women. Regardless of their biological sex, androgynous dentists are characterized by a higher level of mental health, which is revealed in their friendliness, openness, vitality and rationality and a similar subjective estimation of well-being and with a positive estimation of their health, obviously expressed motivation for a higher level of material well-being on condition of covering their basic material needs and a higher level of success motivation.

However, the research shows that the key gender characteristic in the structure of androgynous identity in dentists is masculinity, which is closely interrelated with mental health and subjective well-being, regardless of biological sex. Masculinity in androgynous male dentists is correlated with emotional stability and constructiveness of their communication with people. Higher satisfaction with their material status corresponds to their better mood, their resistance to stress and less hostility and distrust in communication. A higher manifestation of masculinity in androgynous female dentists is accompanied by their susceptibility to stress and their growing confidence in achieving success due to reduced anxiety. Masculine traits in them are closely connected with the indicators of their mood, their inclination for doubts, their easiness of communication their self-estimation of physical and mental health.

We suggest that it is important to keep in mind this specificity of androgynous gender identity of dental professionals not only when planning preventive measures against job burnout, but also when dealing with medical school entrants, i.e. prospective dentists.

## **Limitations**

This research was based on studying the specificity of androgynous identity in dentists, averagely aged 31. Obviously, androgyny can reveal different manifestations in the given occupational group in other age periods. To gain a deeper understanding of the role that androgyny plays in dentistry, it would be reasonable to do similar research in groups of dentists belonging to different dental specialties.

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