

TYPE D PERSONALITY IN CARDIOVASCULAR PATIENTS AND GENERAL POPULATION: PREVALENCE AND RETROSPECTIVE PERCEPTION OF STABILITY

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Abstract. Background and purpose. Type D personality is characterized by negative affectivity and social inhibition. This personality construct is linked to cardiovascular diseases and is considered as stable. However, there has been little research on prevalence in non-clinical samples and on stability of this construct. The main aim of this study was to evaluate the prevalence and retrospective perception of stability of Type D personality in patients and general population. **Methods.** This was a cross-sectional study with a sample from general population (n=304) and cardiovascular patients (n=154). Type D was evaluated using DS14 questionnaire. Respondents were asked to assess their personal characteristics at the moment and how they felt 5 years ago. Items about health condition, lifestyle and sociodemographic characteristics were also included into questionnaire. **Results.** Type D personality was similarly prevalent in both study groups – 33.1% in cardiovascular patients and 35.9% in general population (p =.561). The prevalence of Type D based on retrospective assessment: during the last 5 years increased by 8.4% points in patients (p =.015) and by 0.4% points in comparison group (p =.472). In addition, Type D personality was associated with less healthy lifestyle in both study groups (p<.05) and also with a worse perceived health in comparison group (p<.001). **Conclusions.** Type D personality is similarly prevalent in general population and cardiovascular patients. However, this construct is considered as less stable among the patients. Type D personality was associated with less healthy lifestyle and in part with worse perceived health.

Keywords: negative affectivity, social inhibition, lifestyle, subjective health, health psychology.

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INTRODUCTION

Cardiovascular disease (CVD) is the leading cause of death worldwide (WHO, 2014). In order to reduce the incidence and mortality of CVD it is important to establish not only medical but psychological causes as well. Type D personality is considered to be one of such risk factors and is associated with a short life expectancy in patients with coronary heart disease regardless of any biomedical risk factors (Denollet et al., 1996).

The concept of Type D (“distressed”) personality is commonly used in medical psychology (Pedersen & Denollet, 2006). People, described as Type D personality, are characterised as having signs of negative affectivity (tendency to experience dysphoria, worry and irritability) and social inhibition (discomfort in social interactions, reticence and lack of social poise). Negative affectivity is an important factor in the assessment of subjective well-being and emotional distress (Denollet, 2005). Negative emotions are often associated with depression (Pedersen, et al., 2009), anxiety and fear to lose of control (Kupper & Denollet, 2014).

While individuals with high social inhibition scores have a tendency to perceive the environment as threatening that is commonly related with anhedonia (Lussier & Loas, 2015), social anxiety (Kupper & Denollet, 2014), depression and alexithymia (Batselle et al., 2017).

Type D personality construct is characteristic for 21% (Du et al., 2016) to 52% of cardiovascular patients (Moryś, Bellwon, Jeżewska, Adamczyk, & Gruchała, 2015). Whereas, the prevalence of Type D personality among non-clinical samples is various, but generally considered to be lower than in patients. In the general population the prevalence of this personality type ranges from 13% (Conden, Leppert, Ekselius, & Åslund, 2013) to 40% (Horwood, Chamravi, & Tooley, 2015).

Type D personality is described as a negative factor due to associations with poorer physical and mental health (Mols & Denollet, 2010), higher incidence of adverse clinical outcomes (Pedersen & Denollet, 2006) and lower scores of health-related quality of life (Staniute et al., 2015). According to Ginting, van de Ven, Becker and Näring (2014), this personality type is also related with unhealthy lifestyle: a greater number of cigarettes, higher rates of alcohol and unhealthy food consumption, lower physical activity and weight control, and poor treatment adherence. This may partly explain a higher prevalence of Type D in clinical samples.

Personality is considered to be stable during all the lifespan (McCrae et al., 2000), but in terms of Type D personality and its stability, it is worth to note that research in this field is scarce and the results are inconsistent. The author of Type D personality construct states that both negative affectivity and social inhibition are broad and stable personality traits (Denollet, 2000). During the Type D Scale-14 (DS14) validation process and evaluating the stability of its individual dimensions, it was found that both dimensions of Type D remained stable over 3 months period and did not depend on the patient's mood (Denollet, 2005).

Several studies have shown that Type D is stable with the main personality traits being inherited, which was confirmed in twin studies (Kupper, Boomsma, De Geus, Denollet, & Willemsen, 2011). The Type D seems relatively stable in patients: Romppel, Herrmann-Lingen, Vesper and Grande (2012) revealed that the DS14 scale factorial structure remained stable throughout 6 years of assessment. In patients after myocardial infarction the Type D was stable over the 18 months period, regardless of the mood changes and severity of disease (Martens, Kupper, Pedersen, Aquarius, & Denollet, 2007).

In contrast, other researchers report findings suggesting the Type D personality change. This was demonstrated in samples with coronary syndrome (Ossola, De Panfilis, Tonna, Ardissino, & Marchesi, 2015), myocardial infarction (Condén, Rosenblad, Ekselius, & Åslund, 2014) and in CVD patients before and after cardiac surgery (Dannemman et al., 2010) with follow-up up to 12 months. Such ambiguous results suggest that the stability of Type D personality is not clear.

To summarise the issues, described above it can be stated that the majority of Type D research is mainly focused on patient samples (especially cardiovascular), while the research with general populations is rather scarce – and even when general population is investigated, there are specific strata of society, such as students (Williams et al., 2008), military staff (Rademaker, Van Zuiden, Vermetten, & Geuze, 2011) or elderly people (Kasai, Suzuki, Iwase, Doi, & Takao, 2013). The studies on common people without pre-selection (such as in Germany by Grande, Romppel, Glaesmer, Petrowski, & Herrmann-Lingen, 2010) are very rare. The stability of Type D was investigated even less, again, mainly addressing the clinical samples.

So, the main aim of our study was to evaluate the prevalence and stability of Type D personality in general and patient populations using a retrospective assessment. Due to time constraints we chose to assess the stability using not a longitudinal but cross-sectional approach, evaluating the subjective perception of Type D features on retrospective basis. In addition, we also wanted to compare the subjective health and lifestyle assessments depending on Type D personality, readdressing the findings in previous research on Type D.

METHODS

Procedure and participants

The study was conducted between October 2015 and January 2016 in Kaunas city, Lithuania. The study and its consent procedures were approved by the Ethics Committee for Biomedical Research, Lithuanian University of Health Sciences.

In total, 458 subjects participated in the study: 154 cardiovascular patients (response rate 91%) and 304 individuals of general population as comparison group (response rate 78%). The eligibility criteria for study sample were the age ≥ 18 years old, voluntary participation, ability to communicate in Lithuanian, absence of cognitive disorientation or communicative disabilities. Detailed sociodemographic characteristics of the study sample by group are presented in Table 1.

The group of patients consisted of in-patients at Department of Cardiology, the Hospital of Lithuanian University of Health Sciences (LSMU) Kauno klinikos. The patients had hypertension (51.3%), history of myocardial infarction (43.5%) or stroke (8.4%), with vascular thrombosis (20.1%), cardiac arrhythmia (23.4%), heart failure (7.1%) or other cardiovascular diseases (26.6%).

The comparison group was a quota sample (by age group and gender) of adult population in Kaunas city. More than a third (40.1%) of respondents reported being healthy, whereas other respondents had cardiovascular (30.6%), digestive (11.7%), endocrine and metabolic (10.2%), nervous (9.2%), allergic (7.9%), respiratory (5.8%), renal (5.2%) or other diseases (6.9%).

Table 1. Sociodemographic characteristics of study groups

		Patients (n=154)		Comparison group (n=304)	
		n	%	n	%
Age group	18–44	7	4.5	133	30.6
	45–54	16	10.4	63	17.3
	55–64	38	24.7	35	15.9
	65–74	46	29.9	49	20.7
	75–88	47	30.5	24	15.5
	Mean±SD	67.0±11.80		46.8±18.94	
Gender	Women	60	39.0	175	57.6
	Men	94	61.0	129	42.4
Residence	Rural	52	33.8	36	11.8
	Urban	102	66.2	268	88.2
Education level	Lower than secondary	26	16.9	19	6.3
	Secondary	45	29.2	97	31.9
	Post-secondary	83	53.9	188	61.8

When comparing the study groups by sociodemographic indicators, it was found that patients group was older, having lower education, and prevailing male (61% compared to 42% of men among comparison group; $p < .001$). The study groups were considered to be appropriate without matching, since the primary aim was to reflect the real general population instead of matched by patients characteristics.

MEASURES

Type D personality was assessed using Type D (DS14) scale. This tool was developed by Denollet (2005) and established as valid and reliable instrument both in clinical samples (Svansdottir et al., 2012) and in general population (Grande et al., 2010). The Lithuanian version, used in this study, has been validated by Staniute and Bunevicius (2011). Permission for use was obtained from one of the authors of Lithuanian version. It was shown that Lithuanian version of scale has good psychometric properties and good construct validity (Bunevicius et al., 2012).

In addition, respondents were asked to assess their current health status on a 10-point scale (from 1 – “poor” to 10 – “excellent”) as well as

their lifestyle (from 1 – “*very unhealthy*” to 10 – “*very healthy*”). Sociodemographic characteristics were also included in the questionnaire.

DS14 scale consists of 14 items about personality traits: 7 items describe negative affectivity (NA) and 7 items – social inhibition (SI). Type D personality was indicated when both subscales (NA and SI) scores were ≥ 10 (Denollet, 2005; Staniute & Bunevicius, 2011). The questionnaire showed good internal consistency in this study (Cronbach's $\alpha=.79$ for negative affectivity and $\alpha=.74$ for social inhibition), being very similar in patients ($\alpha=.80$ and $\alpha=.73$, respectively) and comparison group ($\alpha=.78$ and $\alpha=.75$, respectively).

The respondents were asked to score on DS14 by assessing their current status and what they believe they used to be 5 years before. The latter was considered as a subjective estimate of previous Type D profile to assess the retrospective perception of stability of the construct.

Statistical analysis

The data was analysed using IBM SPSS 20.0. In descriptive analysis, the variables were described using percentages and means \pm SD (standard deviation). Inferential statistics included χ^2 test, Fisher's exact test, Student's t-test, Mann-Whitney U test (for independent samples) as well as Student's t-test for paired samples and binomial test (for paired comparisons in current versus retrospective assessments). In data analysis, negative affectivity and social inhibition were analysed both as continuous and as dichotomous indicators with emphasis on the latter approach, based on Type D specific cut-offs of ≥ 10 pts (Denollet, 2005). The statistical significance was set at $p<.05$.

RESULTS

Prevalence of Type D personality

The study showed that based on a current assessment, the negative affectivity in patients was higher than in comparison group (11.7 ± 7.03 and 10.1 ± 5.96 , respectively, $p=.014$), while social inhibition was non-significantly higher in patients than in comparison group (10.6 ± 5.85 and 10.0 ± 6.27 , respectively, $p=.309$). Overall prevalence of Type D in patients and comparison group was similar (33.1% and 35.9%, respectively, $p=.561$).

Higher negative affectivity was slightly more common in patients (57.1% versus 50.7% in comparison group, $p=.189$), while social inhibition – in comparison group (55.6% versus 49.4%, $p=.206$).

Sociodemographic indicators – gender and residence (urban or rural) were not associated with Type D in both study groups, except that this personality type was more prevalent in female patients (45.0% compared to 25.5% in male patients; $p=.012$). However, the Type D prevalence by age group revealed different trends (Figure 1): while in cardiovascular patients the prevalence was steadily increasing from 14% under 45 years of age to 38–39% above 65 years, in comparison group the pattern was rather unclear: though at the age from 45 to 74 years the trend was declining from 44 to 18%, but younger and older age groups did not follow this trend.

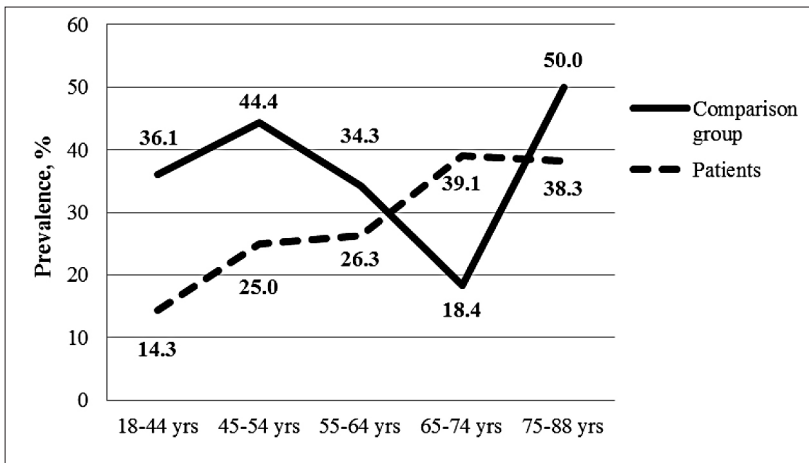


Figure 1. Type D prevalence by age group among patients and comparison group

Having given the numerous literature indicating that Type D is more prevalent in certain subgroups of people, we checked whether these trends occur in our study sample. We analysed patients and comparison group separately by health condition.

The findings demonstrate that in our study there were virtually no health conditions that would be significantly associated with Type D.

Among cardiovascular patients, Type D tended to be more common in all disease groups, but that did not reach statistical significance levels (Table 2). Similar trends were observed regarding Type D dimensions, but again they did not reach statistical significance.

Table 2. Prevalence of Type D and its dimensions among cardiovascular patients

Condition	Status	n	Type D (%)	χ^2	p	Negative affectivity (%)		Social inhibition (%)			
						χ^2	p	χ^2	p		
Hypertension	Present	79	36.7	.94	.331	64.6	3.64	.056	53.2	.94	.331
	Absent	75	29.3			49.3		45.3			
Myocardial infarction	Present	67	34.3	.08	.779	64.2	2.40	.122	43.3	1.75	.186
	Absent	87	32.2			51.7		54.0			
Stroke	Present	13	38.5	.18	.760	61.5	.11	.738	53.8	.12	.735
	Absent	141	32.6			56.7		48.9			
Vascular thrombosis	Present	31	25.8	.94	.333	67.7	1.78	.182	38.7	1.76	.185
	Absent	123	35.0			54.5		52.0			
Cardiac arrhythmia	Present	36	38.9	.71	.401	58.3	.03	.869	55.6	.72	.395
	Absent	118	31.4			56.8		47.5			
Heart failure	Present	11	36.4	.06	1.000	63.6	.20	.759	45.5	.07	.789
	Absent	143	32.9			56.6		49.7			
Other CVD	Present	41	34.1	.03	.870	61.0	.34	.563	53.7	.42	.520
	Absent	113	32.7			55.8		47.8			
Comorbid diseases	Present	81	33.3	<.01	.952	56.8	.01	.926	50.6	.11	.741
	Absent	73	32.9			57.5		47.9			

The analysis in general population found some differences regarding Type D, though they were rare (Table 3). Here, the subjects who reported having nervous diseases had higher prevalence of Type D compared to other people (57% versus 33%; $p=.014$). All other conditions were non-significant for Type D. It can also be noted that negative affectivity was more common in patients with digestive and nervous disorders and significantly lower in people who did not report any health complaint ($p<.05$).

Table 3. Prevalence of Type D and its dimensions in comparison group

Condition	Status	n	Type D (%)	Type D		Negative affectivity (%)		Social inhibition (%)			
				χ^2	p	χ^2	p	χ^2	p		
Allergic disease	Present	24	33.3	.07	.788	37.5	1.80	.179	50.0	.33	.566
	Absent	101	36.1								
Respiratory system	Present	26	38.5	.08	.772	61.5	1.35	.246	42.3	2.03	.154
	Absent	278	35.6								
Digestive system	Present	45	40.0	.40	.530	71.1	8.84	.003	46.7	1.70	.192
	Absent	259	35.1								
Nervous system	Present	28	57.1	6.08	.014	78.6	9.61	.002	60.7	.33	.567
	Absent	276	33.7								
Endocrine system	Present	31	48.4	2.36	.125	64.5	2.65	.103	58.1	.08	.770
	Absent	273	34.4								
Skeletal system	Present	40	30.0	.69	.407	55.0	.35	.556	57.5	.07	.794
	Absent	264	36.7								
Cardio-vascular system	Present	93	36.6	.03	.865	54.8	.94	.333	59.1	.68	.409
	Absent	211	35.5								
Absence of diseases	Yes	122	32.0	1.34	.247	43.4	4.24	.039	54.9	.04	.846
	No	182	38.5								

Retrospective perception of stability of Type D personality

In order to define possible Type D change through 5 years, the study subjects were asked to rate Type D items for both today and 5 years ago. The changes were found that in patients there was increase in Type D (from 24.7% to 33.1%; $p=.015$) and negative affectivity (from 45.5% to 57.1%; $p=.004$), while in general population only the social inhibition has changed, decreasing from 60.9% to 55.6% ($p<.001$). Other changes in study groups were non-significant.

In general, it can be concluded, that Type D subjectively was considered as not stable within 5 years by 9.7% of patients and 13.5% of comparison group ($\chi^2=1.34$, $p=.248$), with negative affectivity being less stable than social inhibition (Figure 2). The comparison of patients by disease demonstrated, that different cardiovascular conditions were related with similar retrospective perception of stability of Type D personality, except that stroke patients were more likely than others to report occurrence of Type D characteristics within the last 5 years. Here, 38% of

stroke patients could be considered as perceiving stable status of Type D while 62% reported previous absence of Type D features.

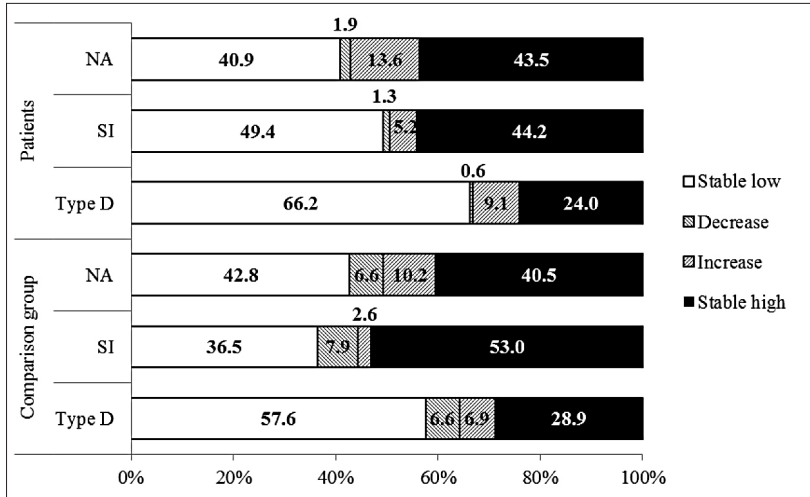


Figure 2. Stability of Type D within 5 years: retrospective assessment of patients and comparison group

Relations with subjective lifestyle and health

In our study, Type D personality was related with lower scores for subjective lifestyle assessment in both study groups (Table 4). It was found that high scores on negative affectivity were related with less healthy lifestyle in both groups and high social inhibition score – only in the comparison group. Similarly, the distressed personality was also associated with poorer subjective health (Table 4). These findings indicate that Type D personality is an important factor for subjective lifestyle and health evaluation, even though the health conditions associate with Type D rather rarely.

Table 4. Lifestyle and subjective health assessment by groups of Type D, negative affectivity and social inhibition

		Patients		Comparison group	
		Lifestyle	Subjective health	Lifestyle	Subjective health
Type D	Yes	5.6±2.35	4.8±2.14	6.4±1.73	6.6±1.94
	No	6.5±2.03	5.5±2.01	7.0±1.63	7.4±1.73
	t	2.56	1.86	3.17	4.01
	p	.012	.065	.002	<.001
Negative affectivity	≥10 pts	5.9±2.34	4.8±2.12	6.5±1.69	6.6±1.95
	<10 pts	6.7±1.87	5.8±1.88	7.1±1.63	7.6±1.60
	t	2.26	2.83	3.42	4.81
	p	.025	.005	.001	<.001
Social inhibition	≥10 pts	5.9±2.19	5.3±2.13	6.6±1.70	7.0±1.78
	<10 pts	6.6±2.13	5.2±2.03	7.1±1.64	7.3±1.96
	t	1.96	-.56	2.53	1.10
	p	.051	0.576	.012	0.273

DISCUSSION

Type D personality is a psychological concept, mostly analysed in clinical samples. The prevalence of this personality type ranges depending on sample characteristics – health condition, age, gender, country etc. However, the majority of the studies do not enrol people without obvious or specific health condition, making the research on Type D personality predominantly based on health disorders. This creates the situation where the prevalence of Type D in such samples is hard to compare with general population, even though it is largely accepted that Type D personality associates with worse physical and mental health (Versteeg, Spek, Pedersen, & Denollet, 2012). Regarding personality type, it is considered as relatively stable concept, with existing proofs on stability (e.g. such personality traits as extraversion or conscientiousness) (Hampson & Goldberg, 2006). The Type D is also considered to be stable, though the evidence for that exists, but is scarce. Therefore, our study was not only targeted to assess the prevalence of Type D both in clinical sample and in general population, but also to address the stability of this concept using retrospective approach.

Our study showed that Type D personality among both study groups was similarly prevalent. This is contradicting to previous findings since

among comparison group the Type D prevalence is usually lower than in patients (e.g. Mols & Denollet, 2010). Nonetheless, there are some studies where Type D prevalence in general population was found to be similar to the one, established in our study (Williams, Abbott, & Kerr, 2015). Some researchers suggest that it is not Type D that is related with worse health, but rather negative affectivity (Williams, O'Connor, Grubb, & O'Carroll, 2012), however, our study did not support this hypothesis either.

More detailed analysis on specific subgroups of study sample revealed that the highest prevalence of Type D was found in subjects who reported having nervous system diseases (57%). This was similarly reported by Grande et al. (2004), who found the prevalence of Type D personality in psychosomatic patients being 62%. Possibly, those patients experience more distress that links both to mental health impairment and Type D.

In our study the Type D was more reported by women, which is found in the previous study as well (Staniute et al., 2015). Such gender differences may be due to women's tendency to report increased anxiety and distress compared to men (Mommersteeg, Meissner, Denollet, Aarnoudse, & Widdershoven, 2013). Comparing age groups, in our study the Type D personality was the most prevalent in patients, aged 65–74 years, while in comparison group the peak was observed in the eldest group – people, aged 75 years and older. These results are inconsistent with the previous research, where the highest prevalence is mainly observed in young adults (33–38%) (Williams et al., 2008; Šmitas & Perminas, 2015; Batsse et al., 2017) and during the older age groups it transforms to a decreasing trend (e.g. Wiltink et al., 2011). Nonetheless, some studies find high Type D prevalence rates in elder samples as well, such as 46% among elderly Japanese (Kasai et al., 2013).

When it comes to the issue of Type D stability, we estimated Type D by asking the respondents to rate Type D items as they feel today and as they believe they used to be five years ago. In general population we found that the prevalence of this personality construct seems to be stable, which is consistent with findings of Zohar (2016) in Israeli population. However, our findings, related with cardiovascular patients, were less consistent with the previous research.

Thus, we found that in patients the prevalence of Type D during 5 years increased from 25% to 33%. It is possible that this increase could be influenced by impaired health and subsequent increase of negative affectivity. According to Watson and Pennebaker (1989), health problems are likely to cause negative emotions, so it could be one of the reasons why negative affectivity has increased among patients but not in comparison group. Of note, we found very unstable and negative perception of Type D change in stroke patients – 38% of stroke survivors reported being not a Type D personality both today and five years ago, while the rest (62%) shifted from having no Type D features towards being Type D personality. It is possible that retrospective Type D assessment could be influenced by patient's medical condition, with amelioration of memories in earlier life or pessimism in perceptions of current health status. Therefore, to our knowledge, this is the first study about stability of Type D personality in patients after stroke so this requires more research.

The previous research in patients with acute coronary syndrome showed low stability for negative affectivity and Type D personality and suggested that DS14 questionnaire does not describe the fundamental and permanent personality traits but shows emotional instability (Ossola et al., 2015). Loosman et al. (2017) study with dialysis patients also support that Type D personality is possibly more a state instead of a trait phenomenon. Kristofferzon, Lofmark and Carlsson (2007) claim that stressful situations or sudden health impairment (e.g. myocardial infarction) could have an effect on personality. However, some studies found that Type D personality in patients after myocardial infarction has remained stable over 18 months (Martens et al., 2007).

Though our study showed that Type D prevalence does not differ in patients and general population, we found that Type D personality is associated with less healthy lifestyle in both study groups. Previous studies are in line with this association (e.g. Ginting et al., 2014). Moreover, in comparison group the Type D was also related with worse perceived health. These findings in general population coincide with the previous cross-sectional study in the United Kingdom (Williams et al., 2015). This personality type has been associated with a poorer physical health status (Versteeg et al., 2012), musculoskeletal pain and psychosomatic symptoms (Conden et al., 2013). It is counterfactual that people with Type D personality report worse lifestyle or health perceptions, but on the other

hand the sample of people with cardiovascular diseases report similar Type D features to general population. This issue could be addressed not in a cross-sectional study like ours, but rather in a longitudinal study.

Since the stability issue in our study was approached in a retrospective manner, our results should be interpreted with caution due to potential recall bias. The retrospective assessment may have affected our findings in a way that patients rating their status 5 years ago were assessing it in a less stressful way, suggesting that their current condition currently is worse compared to that 5 years ago. Also, the five-year period can be interpreted differently between different age groups and future research needs to examine whether the age factor is an independent predictor in personality assessment. Therefore, since it was a retrospective estimate, it does not provide direct evidence for the stability of personality type.

In our study, the comparison group was not matched which made the comparing of study groups relatively unbalanced. However, we chose this perspective in order to reflect the general population foremost, and not to have a balance between the groups – by losing the natural variation within a general population through matching, we may bias the findings towards underestimate.

Comparison group also included the people with certain health disorders, however, we tried to check for difference in subgroups analyses and we found that there were no major differences of Type D prevalence in comparison group considering specific diseases.

Our rationale for choosing the retrospective measurement of personality was due to the fact that it would be hardly possible to collect repetitive data from the same individuals, especially from general population. This is not only restricted due to logistic reasons, but also may raise selection bias with less typical subjects keen to participate in the second measurement. To our knowledge, this is the first study to use such approach for stability assessment of Type D personality – previous research has used retrospective approach with other personality indicators (e. g. Woodruff, 1983).

Despite these limitations, our study has some strengths. First, the study included the comparison group designed through quota sampling to represent general population which had not been common in Type D research before. This gives a more realistic estimate of Type D

prevalence in society. Also, as far as we know, this study is the first to report the prevalence of Type D personality and its dimensions by different diseases groups. In addition, we analysed the prevalence of Type D in patients and comparison group by age group. This allows for a more clearly perception of the prevalence of Type D depending on the characteristics of study sample. Moreover, there has been little research done on the issue of stability of Type D personality, and it is one of the first studies to assess the stability of Type D personality using a retrospective approach.

Some practical implications could be useful in health care, where professionals could identify the Type D patients and communicate more openly and actively. This could be effective to overcome high social inhibition of patients with Type D patients who may be ashamed to ask about own health condition or treatment. Another way to help Type D patients could be psychosocial interventions that promote positivity and reduce the experience of negative emotions. Such approaches as psychoeducation, relaxation or additional attention may reduce the distress level of these patients and improve their recovery.

CONCLUSION

It can be concluded that prevalence of Type D personality in general population and in cardiovascular patients is quite similar (33–36%). The retrospective assessment showed that general population in comparison to CVD patients report more stable perceptions of personality in terms of Type D. In addition, Type D personality was associated with less healthy lifestyle in both study groups and also with a worse perceived health in comparison group.

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ASMENYBĖS D TIPAS TARP KARDIOLOGINIŲ PACIENTŲ IR BENDROJOJE POPULIACIJOJE: PAPLITIMAS IR RETROSPEKTYVUSIS STABILUMO SUVOKIMAS

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Santrauka. Problema. Asmenybės D tipu apibūdinami žmonės, kurie pasižymi neigiamu afektu ir socialiniu varžymusi. Šis asmenybės konstruktas siejamas su širdies ir kraujagyslių sistemos ligomis ir laikomas pastoviu, nors tyrimų, vertinančių asmenybės D tipą neklinikinėse imtyse ir jo pastovumą, yra mažai. Pagrindinis šio tyrimo tikslas – įvertinti asmenybės D tipo paplitimą ir retrospektyviai įvertinti jo pastovumą tarp pacientų ir bendrojoje populiacijoje. **Metodika.** Vienmomentis tyrimas, kuriame dalyvavo 154 pacientai, sergantys širdies ir kraujagyslių sistemos ligomis, ir 304 lyginamosios grupės dalyviai. Asmenybės D tipas vertintas naudojant DS14 klausimyną, prašant respondentų įvertinti asmenybės savybes dabar ir kaip jautė prieš penkerius metus. Anketą taip pat sudarė klausimai apie sveikatos būklę, gyvenseną, socialines ir demografines charakteristikas. **Rezultatai.** Asmenybės D tipas abiejose tyrimo grupėse buvo paplitęs panašiai – 33,1 proc. tarp pacientų ir 35,9 proc. bendrojoje populiacijoje ($p = 0,561$). Vertinant D tipo pastovumą retrospektyviai, paaiškėjo, kad šio asmenybės tipo paplitimas per penkerius metus padidėjo 8,4 proc. punkto pacientų grupėje ($p = 0,015$) ir 0,4 proc. punkto lyginamojoje grupėje ($p = 0,472$). Asmenybės D tipas taip pat buvo susijęs su mažiau sveika gyvensena abiejose tyrimo grupėse ($p < 0,05$), o lyginamojoje grupėje – ir su prastesne subjektyviai vertinama sveikata ($p < 0,001$). **Išvados.** Asmenybės D tipas tarp širdies ir kraujagyslių sistemos ligų pacientų ir bendrojoje populiacijoje yra paplitęs panašiai, tačiau šis reiškinys pacientų suvokiamas kaip mažiau stabilus. D tipas taip susijęs su mažiau sveika gyvensena ir iš dalies su prastesniu subjektyvios sveikatos įvertinimu.

Reikšminiai žodžiai: neigiamas emociingumas, socialinis varžymasis, gyvensena, subjektyvi sveikata, sveikatos psichologija.

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