

Lifestyle among urology trainees and young urologist in the context of burn-out syndrome.

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Lifestyle among urology trainees and young urologist in the context of burn-out syndrome.

ABSTRACT:

Introduction: Burnout syndrome has increased dramatically in urology within recent years. A healthy lifestyle has been described as a protective factor. However, data on lifestyle is lacking among residents and urologists and remains to be elucidated. We aim to assess lifestyle among urology residents and young urologists across Europe.

Materials and methods: Members of the European Society of Residents in Urology (ESRU) designed a 34-item online survey via surveymonkey.com. The survey was designed in accordance with Checklist for Reporting Results of Internet E-Surveys (CHERRIES) guidelines and was distributed via e-mail and social media in 23 European countries to urology residents and young urologists. The primary endpoint was reported as self-perceived health status. Secondary endpoints included questions on sleeping disorders, exercise and dietary habits. Data was analyzed SPSS software.

Results: A total of 412 residents and young urologists responded to the survey. The mean age of the respondents was 31.4 ± 3.9 yr. The data on dietary intake demonstrate a mean of 2 or more cups/day of coffee and alcohol consumption 2-3 times/week. The intake of fruits and vegetables is very low, almost 60% of responders consume <1 portions of fruit/day and more than half (52%) eat <1 portion of vegetable/day. Overall, the majority of respondents reported to have a moderate to low satisfaction with lifestyle (59.65%) and low to moderate self-perceived health status (45.94%). Moreover, 46% of respondents reported to have some kind of sleep disturbance and 60% only slept 6 hours/night or less with 53% reporting a moderate to

1 very low quality of Sleep. Regular exercise of at least 30 min twice weekly was only
2 performed by 33% of the respondents.
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5 **Conclusions:** Residents and young urologists have unbalanced diet, tend to exercise
6 too little and often suffer from sleep disturbances all of which increases the risk of
7 burnout. Physicians, organizations and institutions should strive to promote healthy
8 lifestyle, resiliency and support programs.
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11 **Keywords:** burnout syndrome, lifestyle, urology, training, resiliency, sleep disturbances
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INTRODUCTION

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4 Depression, stress and burnout syndrome have become a genuine problem in the
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6 urology specialty. Burnout seems to have become a mass phenomenon, receiving
7
8 constant media attention. More and more people are missing work due to burnout.
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10 The term “burnout” was coined in the 1970s by the American psychologist Herbert
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12 Freudenberger. He used it to describe the consequences of severe stress and high
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14 ideals in “helping” professions. Doctors and nurses, for example, who sacrifice
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16 themselves for others, would often end up being “burned out”: exhausted, listless, and
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18 unable to cope. Nowadays, the term has entered the common vernacular from
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20 stressed-out careerists and celebrities to overworked employees and homemakers. (1)
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28 Surprisingly, there is no clear definition of what burnout really is. Most comon
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30 definition used is that burnout syndrome is a state of emotional, mental, and physical
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32 exhaustion caused by excessive and prolonged stress. It occurs when you feel
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34 overwhelmed and unable to meet constant demands. As the stress continues, you
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36 begin to lose the interest or motivation that led you to take on a certain role in the first
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38 place. Various figures appear in the press; some German health insurance companies
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40 say that up to nine million people are affected in Germany. (1,2)
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48 Burnout syndrome frequency is higher among health professionals than in the general
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50 population and its incidence has increased rapidly in recent years (2-6). Urology is one
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52 of the specialties with the highest incidence and severity of burnout (7). This increase
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54 in recent years might be partly explained by an increase in the proportion of time
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56 health professionals spend on bureaucracy compared to having patient contact and
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58 performing surgery. (8-10)
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1 The prevalence of burnout syndrome among medical students and residents have
2 been reported to be around 40-76% (5,8). Factors related include: work overload,
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4 documentation, administrative / bureaucratic workloads, a hostile work environment,
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6 experience with suffering, adaptability, stressful life events, gender, marital status,
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8 academic activity and lifestyle. (12-14)
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13 Burnout can lead to poor work performance, medical errors, depression, substance
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15 abuse, family and relationships disruption and suicidal ideation. Data from American
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17 Foundation for Suicide Prevention shows an estimated 300 – 400 physicians death due
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19 to suicide in the U.S. per year. (15-18)
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24 Prevention strategies of burnout syndrome include resilience training, a balanced
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26 lifestyle, teamwork, and support programs. Healthy lifestyle is a key protective factor
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28 against stress and leads to greater work performance and patient satisfaction. (19-21)
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33 With this study we aimed to assess self-perceived health status, sleep disturbances
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35 and lifestyle habits among urology residents and young urologists from European
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37 countries in order to shed some light on this neglected important issue.
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44 **MATERIAL AND METHODS**

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47 Members of the European Society of Residents in Urology (ESRU) designed a 34-item
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49 online survey using the platform www.surveymonkey.com (SurveyMonkey, Portland,
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51 OR, USA). The survey was designed and carried out in accordance with the Checklist for
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53 Reporting Results of Internet E-Surveys (CHERRIES). (22)
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1 Demographic data of respondents included: age, gender, current work status
2 (resident/urologist) and country. Variables related to lifestyle included: self-perceived
3 health status (SPHS), overall satisfaction with lifestyle (SL) hours of sleep, sleep
4 disturbances, Quality of Sleep (QoS). Fruit and vegetable intake, coffee and alcohol
5 consumption, smoking habit, weekly performed exercise, (Appendix/Supplementary
6 data 1 include complete Survey). Initially the survey was tested to verify its correct
7 usability and technical functionality, and then it was sent via mailing list of ESRU to the
8 national communicator officers (NCOs). In addition, we disseminated the survey using
9 social media (SoMe) accounts of the European Society of Residents in Urology. Data
10 was collected from January 2017 to January 2018.

26 **Statistical Analysis**

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29 Statistical Package for the Social Sciences (SPSS) software version 21.0 (SPSS Inc.,
30 Chicago, IL, USA) was used for descriptive statistics and statistical analysis. Variables
31 are expressed as means \pm standard deviation (SD). Subset analyses were performed
32 comparing lifestyle variables between groups according to different demographic
33 characteristics. In the comparative analysis, lifestyle were stratified by training status
34 (residents vs certified urologists), gender (male vs female), age (younger than mean
35 age vs older than or equal to mean age) and marital status (single, married, divorced).
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48 Statistical significance was accepted at p-values < 0.05
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54 **RESULTS:**

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57 A total of 412 residents and young urologist responded to the survey. The mean age of
58 the respondents was 31.4 ± 3.9 yr. The majority of responders were from Spain,
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Belgium, Denmark and Italy, representing more than a half (51%) of the polled population. Demographic data for the survey respondents are shown in Table 1.

Dietary Habits

The dietary habits (Table 2) revealed a coffee intake of 2-4 cups/day (55% respondents). With regards to alcohol consumption, 29.9% of the respondents reported to drink alcohol 2-3 times/month (especially on weekends), 2-3 times/week by 27.7% and daily by 5.6%. Moreover, 22.6% of responders were smokers or former smokers. The intake of fruit and vegetables showed that 60% of responders consume ≤ 1 portions of fruit/day and around half (52%) eat ≤ 1 portion of vegetable/day.

Exercise, sports and sleep characteristics.

The large majority (77%) do not perform exercise, or perform < 2 times/week physical exercise (≥ 30 minutes) (Table 2).

Sleep characteristics showed that 60% of responders reported 6 hours of sleep/night or less; almost half of responders have some sleep problem (46%) as difficulty initiating sleep, interrupted sleep or early awakenings. Furthermore, 53% reported a moderate to very low Quality of Sleep (Table 2 & Figure 1).

Lifestyle and Health status

Satisfaction with Lifestyle (SL) rates were perceived as moderate to low by 59.65% and self-perceived health status (SPHS) as moderate to low by 45.94% of respondents (Figure 2). Additionally, 35% admitted that their health status interferes with their daily activity at home and treating patients (Figure 3-5).

DISCUSSION

This is the first survey to report on lifestyle among residents and young urologists across Europe. Satisfaction with Lifestyle (SL) rates were perceived as moderate to low by 59.65% and self-perceived health status (SPHS) perceived as moderate to low by 45.94% of respondents.

Spain, Italy, Denmark and Belgium represent half of the respondents (51%). This could be explained by several factors 1) according to the ESRU database, these countries are in the top 10 in number of residents and together they represent more than half of residents (> 2200 of 3300 residents), 2) in accordance with previous surveys there is a good response rate in these countries, reflecting a good line of communication of ESRU through email list and adoption of SoMe 3) there is great interest in issues affecting residents and young urologists, 4) burnout syndrome, depression and lifestyle are topics currently of great interest in the urological community. This interest is also reflected by the fact that this survey has reached the highest number of respondents of all surveys carried out from ESRU (412 respondents). (23)

Burnout syndrome is characterized by 1) emotional exhaustion (EE), 2) depersonalization (DP) and 3) low personal performance (PA) or feeling of low achievement (1, 2). According to the "Lifestyle report: Race and ethnicity, bias and burnout syndrome 2017" published in Medscape, a considerable increase has been observed in the years 2013 - 2017. More than 14.000 doctors from 30 specialties showed surprising results. The overall frequency of burnout syndrome was 41% and in 2017 it was 51%. It is striking that among the specialists who reported burnout syndrome, urologists had the highest severity score (average severity score: 4.6) (11).

1 The evidence from the few studies carried out so far highlights the importance that
2 attention should be given to this topic in our specialty. In order to prevent burnout
3 syndrome and the consequences of this, appropriate studies should be carried out to
4 develop strategies on how to inform and advise urologists and residents.
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10 Regarding urology, O'Kelly F et al, developed in 2015 a survey among members of the
11 Irish Urological Society (ISU) and the British Urological Society (BAUS). The survey
12 reached 575 respondents (response rate of 42%). They reported a mean EE of 23.5 %
13 (considered moderate), an average of DP of 82% (considered moderate) and a PA of
14 17.1%. Furthermore they revealed that 80 % (460 respondents) agree that burnout
15 syndrome should be evaluated among professionals of Urology and in addition 60%
16 (345 respondents) would like to receive advice if they were offered (12). These results
17 are worrying and should be taken seriously.
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31 According to several studies of residents and specialists surveyed in several surgical
32 specialties, greater differences were found in burnout when comparing both groups.
33 Based on MBI scores (Maslach burn-out syndrome Inventory) residents during the
34 specialty are more likely to experience burnout syndrome and depression than
35 specialists. In addition, residents asked in several studies reported less QoL satisfaction
36 than specialists. (6,8,24)
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48 Burnout syndrome has been related to work overload, documentation,
49 administrative/bureaucratic workload, hostile work environment; its consequences
50 include poor work performance, medical errors, depression, substance abuse,
51 disruption in family, couple relationships and suicidal ideation. (15-18)
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Studies suggest that burnout syndrome and depression impact on QoL and lifestyle, and that, conversely, a healthy lifestyle is a protective factor (17,19-21). However, lifestyle factors among urologists and residents of urology have not been studied previously. According to the results of this survey, young residents and urologists do not seem to lead a healthy lifestyle, many consume <1 portion of vegetables or fruit per day. The vast majority (77%) does not perform exercise or perform less than 2 times/week physical exercise of more than 30min duration. The observed unhealthy lifestyle could have a role in burnout and depression in young and resident urologists. Furthermore, we must remember that healthy lifestyle and well-being in doctors is also related to a better quality of care and advice to patients. Consequently the unhealthy lifestyle observed among young urologists and residents may have negative consequences in the care of patients and advice in urological diseases.

Alterations of sleep patterns is one of the most frequently findings in professionals who exhibit burnout syndrome (2-4,7) On this survey, almost half of responders have sleep problems (46%) as difficulty initiating sleep, interrupted sleep or early awakenings. In addition, they claimed to sleep \leq 6 hours (60%), with quality of sleep rated as moderate to low (52%), but despite this almost all report not using sleeping pills (96%).

In this survey, we included three questions from validated questionnaires (Figures 3-5), almost a third of the respondents admitted that they have fallen asleep in situations like "in front of the computer or when traffic is arrested", that "physical health interferes with daily activity in the home" and also with "ability to treat patients" (3,4,8). These responses reflect the state of exhaustion of urology residents and young

1 urologists, which can have serious implications in the treatment of patients, the ability
2 to make decisions and might lead to medical errors. Previous studies have estimated
3 that 15-30% of medical errors may be due to exhaustion of health professionals. (18)
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8 Academic studies of burnout syndrome have specifically identified factors related to
9 it, including work overload, documentation, administrative / bureaucratic workload,
10 academic activity, hostile work environment and experience with suffering. In contrast,
11 others factors have been described as protective such as resilience, adaptability to
12 stressful life events, marriage, familiar support, healthy lifestyle, regular physical
13 activity, annual visits to primary care physicians, and a variety of other personal
14 wellness strategies, including focusing on what It is personally important in life, taking
15 vacations and nurture the religious / spiritual aspects (25-29). Factors like gender are
16 controversial to be related to burnout syndrome (3-5). According to our survey data,
17 39% of respondents are married and another 22% are in a relationship. In addition 67%
18 are men and 33% women, one would say that urology has been a predominantly male
19 specialty for years, fortunately the number of female specialists is growing in recent
20 years; although the studies do not clearly indicate a link between burnout syndrome
21 and gender, future studies are needed to find out if gender can play a role.
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45 It is necessary to take strategies to fix this problem. Strategies for prevention include
46 resilience training, lifestyle balance, teamwork, and support programs. Many authors
47 and academic studies agree that the most important individual strategy to promote is
48 resilience. Resilience refers to the ability of an individual to adapt to adversity.
49 Resilience correlates positively with low psychosocial stress and high well-being.
50 Prospective studies suggest that resilience training can improve psychological
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1 disorders, self-efficacy and self-esteem. Although resilience programs can take a
2 considerable amount of time, it has been shown that a brief intervention among
3 physicians has the potential to improve stress, anxiety and quality of life. (26-29)
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8 Another concept that should be considered is leadership, in this sense members of the
9 Young Urologists Office (EAU-YUO), have launched leadership training programs. The
10 understanding of the concept of leadership encompasses a different point of view and
11 a paradigm shift to the traditional boss model in force. The importance of this topic is
12 that a leader should represent the cornerstone on which a urology service is based.
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24 Recognizing the dangers of an exhausted doctor with burnout syndrome, some health
25 care organizations have instituted programs designed to promote resilience and well-
26 being among their staff, like the SWADDLE program (Staff Well-being Assistance During
27 Difficult Life Events) from Baylor Scott & White Health, the health system in Texas, also
28 the LiveWell program (Work, Eat, Learn, and Live) of the Carolina health system and
29 the WellMD of the Stanford health system. These programs offer resilience
30 techniques, stress management, healthy behaviors to doctors, free courses, expert
31 talks and a variety of online resources including webinars, as well as personalized
32 support during stress situations and crisis. (31-32)
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48 The present study has some limitations. Although it represents the largest lifestyle
49 survey in urology and has reached the highest number of responders of surveys from
50 ESRU (with more than 400 respondents), the population of the survey might not be a
51 true representation of the urological population because it has been distributed via
52 email list and SoMe. In addition, people who identify with this issue may be more likely
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1 to answer the survey, while those who are not interested may ignore it. Here, it was
2 not possible to determine the defined number of recipients, which is a common
3 phenomenon on research using online surveys distributed via SoMe. Therefore, we
4 could not calculate a response rate. In addition, there are no validated questionnaires
5 regarding lifestyle in urologists. However, we designed and distributed the survey in
6 accordance with CHERRIES guidelines to achieve the best possible methodological
7 quality. Moreover, the nature of the survey provides subjective responses that reflect
8 the respondents' judgments rather than an objective evaluation.
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10 Finally, while it is true that there are no support programs in exhaustion and burnout
11 for doctors in several countries in Europe, it is our duty to make a call for reflection
12 through this study to the problems of both lifestyle and burnout among doctors,
13 residents and urologists. One of the issues is probably an existing gap in the support
14 from the system, it is important to promote strategies in resilience and healthy
15 lifestyle, in fact there are a variety of online resources in SoMe platforms such as
16 YouTube, in resilience, coaching and positive psychology that are available to
17 everyone.
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45 **CONCLUSION**

46 Residents and young urologists have unbalanced diet, tend to exercise too little and a
47 fairly amount suffer from sleep disturbances all of which may increases the risk of
48 burnout syndrome. They report that their lifestyle impacts on their personal life as well
49 as their delivery of patient care. Healthcare organizations should strive to promote
50 healthy lifestyle, resiliency and supports programs.
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COMPLIANCE WITH ETHICAL STANDARDS

Authors declare that there are no conflicts of interest, this research does not include human participants and/or animals, so no informed consent is needed.

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FIGURE LEGENDS

Figure 1. Sleeping problems. Lifestyle survey among residents and young urologist in Europe.

Figure 2. Self-perceived health status (A) and satisfaction with lifestyle (B). Lifestyle survey among residents and young urologist in Europe.

SUPPLEMENTARY DATA

Appendix/Supplementary data 1. Lifestyle survey among residents and young urologist in Europe. Full questionnaire.

Appendix/Supplementary data. Figure 3. Survey question. Have you recently fallen asleep when you were in a situation such as: traffic stopped, driving, at the computer, on the subway or bus?

Appendix/Supplementary data. Figure 4. Survey question. Has your physical health interfered with your ability to do your daily work at home?

Appendix/Supplementary data. Figure 5. Survey question. Has your physical health/stress interfered with your ability treating patients?

Tabla (Table) 1

Age	31.4 ± 3.9 yr
Gender	Male: 67.2%
	Female: 32.8%
Current status	Resident: 76.4%
	Urologist: 22.4%
	Other: 1.2%
Marital Status	Single 36.9%
	Married 39.8%
	Divorced 1.2%
	In a Relationship (unmarried) 22.1 %
Country	Austria 0.5%
	Belgium 9.5%
	Denmark 12.1%
	France 10.0 %
	Grece 0.2%
	Georgia 1.0 %
	Germany 1.2 %
	Hungary 8.0%
	Ireland 0.7%
	Italy 11.9%
	Lithuania 0.5%
	Netherlands 1.0%
	Poland 0.7%
	Portugal 3.9%
	Slovakia 3.9%
	Slovenia 1.5%
	Spain 18.4%
	Sweden 0.5%

	Switzerland 0.5%
	Turkey 4.9%
	UK 1.9%
	Others: 7.2 %

Table 1. Demographics of 412 respondents to Lifestyle survey among urology residents and young urologist in Europe.

Tabla (Table) 2

Item	Amount	Respondents	%
Coffee /Day	0	69	16.7%
	1	84	20.4%
	2	101	24.5%
	3	80	19.4%
	4	49	11.9%
	5	29	7%
Alcohol	Never	56	13.6%
	Weekends	123	29.9%
	2-3 / month	96	23.3%
	2-3 / week	114	27.7%
	Daily	23	5.6%
Smoking habit	Never	319	77.4%
	Smoker	63	15.3%
	Former Smoker	30	7.3%
Energy Drinks/week	0	355	86.2%
	1	25	6.1%
	2	11	2.7%
	3	10	2.4%
	4	5	1.2%
	5	6	1.5%
Junk Food/Week	0	100	25.4%
	1	182	46.2%
	2	52	13.2%
	3	31	7.9%
	4	13	3.3%
	5	16	4.1%
Fruits / Day	0	41	10.4%

	1	194	49.2%
	2	97	24.6%
	3	43	10.9%
	4	11	2.8%
	5	8	2.0%
Vegetables/Day	0	44	10.6%
	1	174	42.2%
	2	130	31.6%
	3	50	12.2%
	4	14	3.4%
Exercise >30min/week	0	117	28.43%
	1-2	204	49.49%
	3-5	74	18.02%
	>5	17	4.06%
Exercise/Sport performed	Fitness	110	26.65%
	Running	157	38.07%
	Swimming	53	12.94%
	Biking	92	22.34%
	Tennis	21	5.08%
	Group sports (Soccer, Basketball, Rugby, Handball..)	61	14.72%
	Other	58	14.21%
	None	89	21.57%
Sleep Hours	< 4	6	1.52%
	5	66	15.99%
	6	179	43.40%
	7	156	37.82%

	> 8	5	1.27%
Quality of Sleep	Very High	34	8.38%
	High	157	38.32%
	Moderate	181	43.65%
	Low	36	8.63%
	Very Low	4	1.02%

Table 2. Lifestyle variables of the 412 respondents survey among Residents and young urologist in Europe.

Figura (Figure) 1

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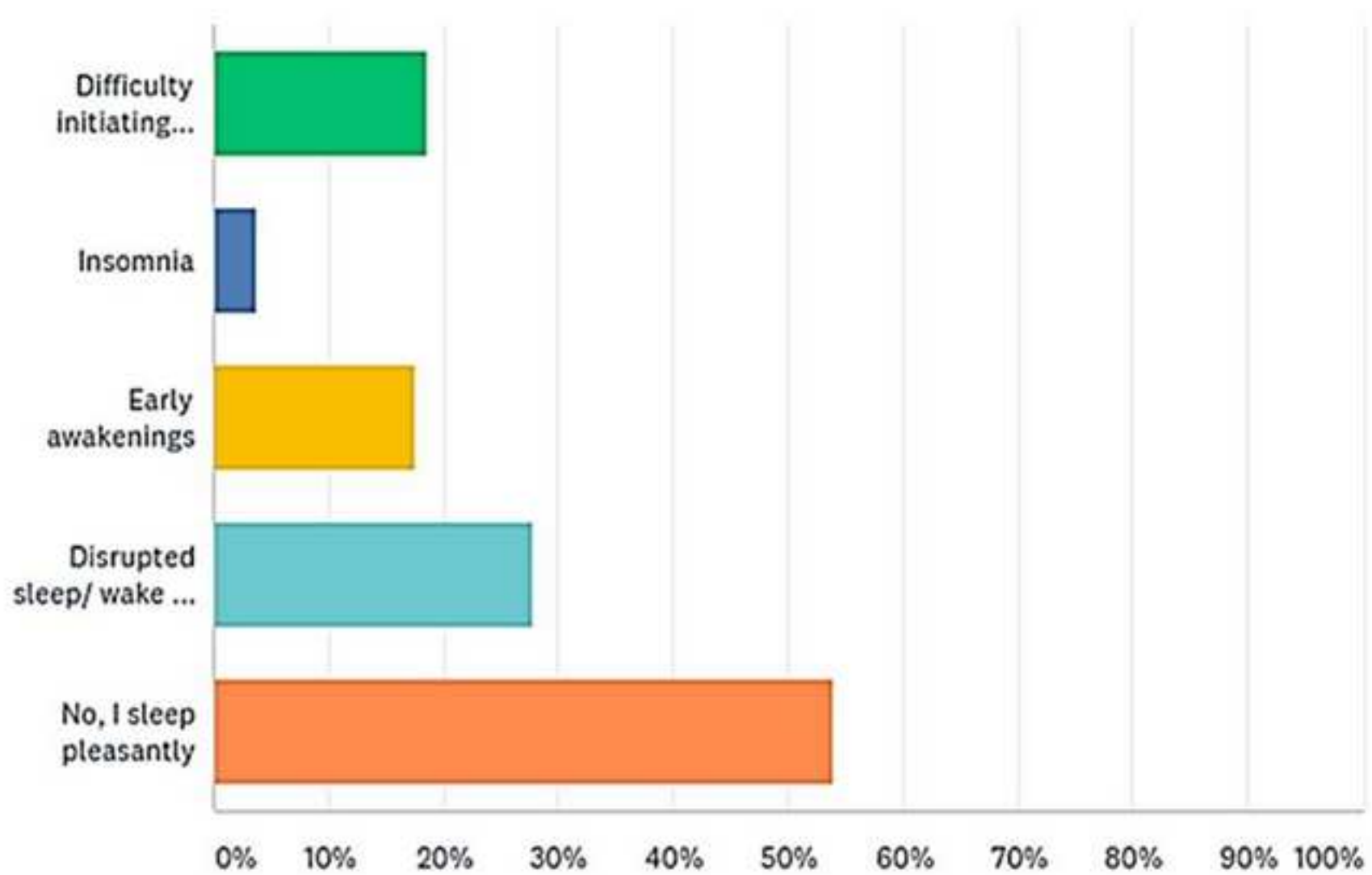
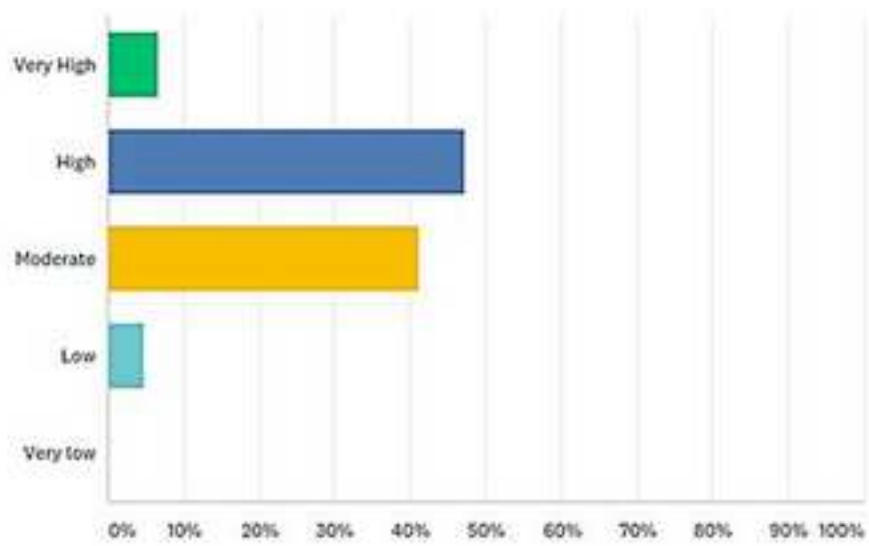
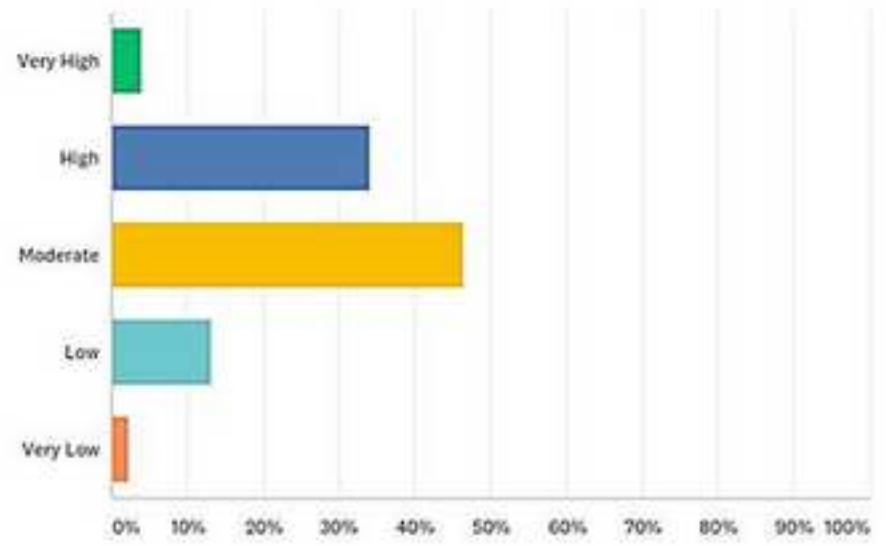


Figura (Figure) 2
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A



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Figura (Figure) 3

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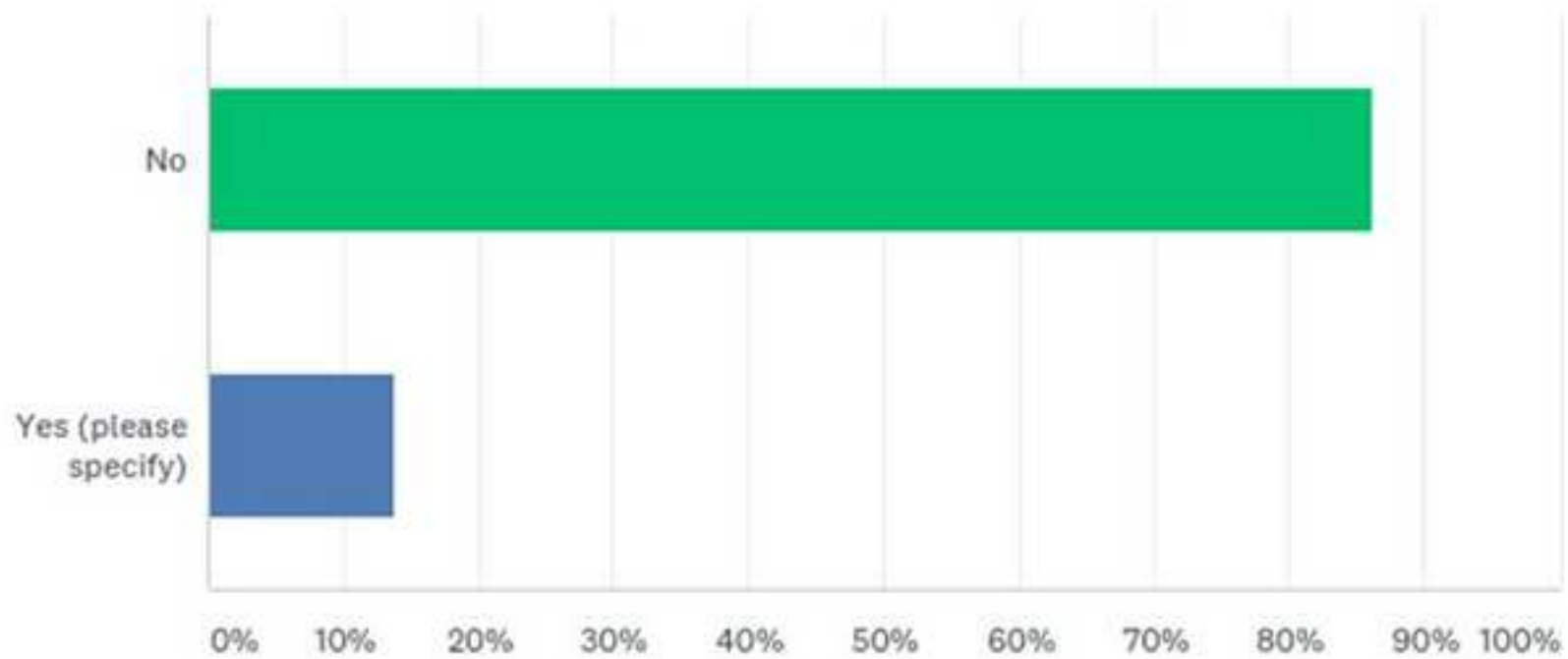


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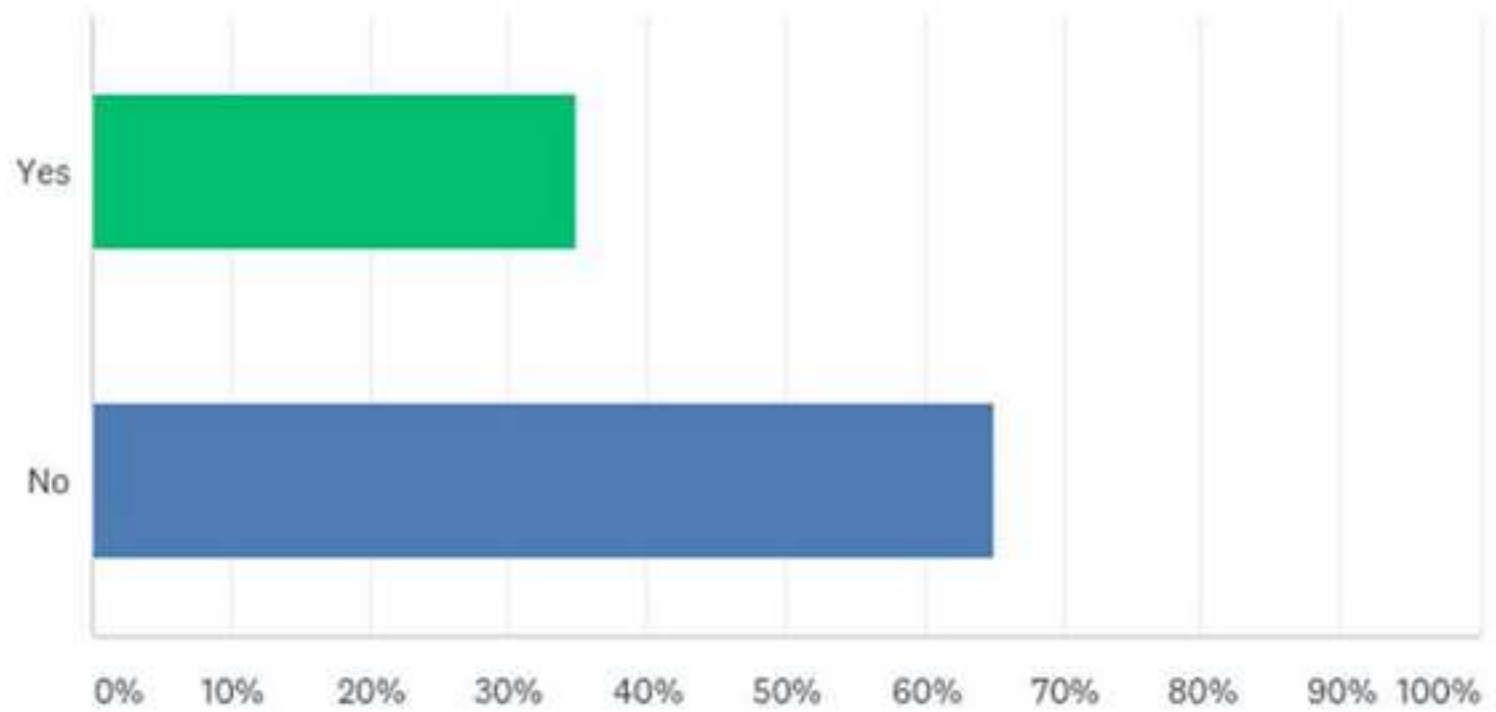


Figura (Figure) 5
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