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Research Article

Self-Assessed Health and Self-Medication: Knowledge, Attitudes, and Practices among Parents of Primary School Children

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Abstract

Self-rated health has widely been used as an indicator of health status in social health policy research that independently predicts morbidity and mortality. A total of 253 respondents out of 560 minimum reported once, or trice or thrice self-medication within six months of recall period. Most common conditions/symptoms for self-medication were analgesics (77.93%) anti-allergics (30.6%), antibiotics (17.2%) and decongestants (52.66%), whereas only half of the respondents never gave their children medicaments without doctor's prescription, 24% declared medicament without prescription once, 19% 2-3 times and 2.3% for more than 3 times. Over the counter drugs (60%) was the most common category of drugs used by all respondents. Our study evaluated Self-rated health and self-medication knowledge, attitudes, and practices of parents of primary school children. The questionnaire was distributed to the parents in electronic form. The sample consisted of 560 parents. The correlation between Self-rated health and self-medication and demographic characteristics of parents has been sought and highlighted. Self-medication (including use of antibiotics) is a major global problem and can lead to serious consequences for healthcare systems.

Keywords: Self-medication; Self-rated health; parents; Health promotion; Knowledge

Introduction

Self-assessed general health (SAH) also known as self-rated health (SRA) or self-perceived health (SPH), based on a simple question such as "In general, how would you assess your health?" is one of the most frequently employed health measures in social science re-search. It has been used to examine the relationship between health and a wide range of social and economic factors, including income [1], education [2], socioeconomic status [3], retirement [4] and early life experiences [5]. Owing to limited space for health questions, SAH is often the only consistently collected measure of health in general population surveys, particularly across waves of longitudinal surveys. Therefore, it is often the sole measure used in many analyses of the determinants and consequences of health [6]. The main advantage of using SAH is that it is probably the most feasible and inclusive measure of health status, as its comprehensive nature allows it to capture elements of health that more guided questions cannot [7]. But, at the same time, it provides little guidance to researchers as to what individuals are thinking of when they assess their general health status. When an individual reports that their health is "poor", is it because they are in pain, depressed, have limited mobility, or something else entirely? Similarly, what does a report of "excellent" mean? Does it signify the absence of illness or the presence of vigor? No doubt, reports are driven by several underlying factors; however, given the popularity of SAH and its unique ability to predict a number of health outcomes [8,9], it's important we thoroughly understand its structure.

Self-medication (SM) and Self-medication of Antibiotics (SMA) are a global phenomenon that has been receiving considerable attention within the healthcare systems worldwide [10]. According to the World Health Organization (WHO), self-medication is defined as one element of self-care and represents the selection and use of medicines by individuals to treat self-

recognized illnesses or symptoms without the guidance of physician for either diagnosis, treatment, or supervision of the treatment [11-14]. The practice of self-diagnosis and SMA by the patients themselves is widespread [15]. According to the World Health Organization (WHO), sub-optimal prescribing practices such as inadequate dosing, incomplete treatment courses and indiscriminate drug use arising due to SM have contributed to the emergence and spread of antimicrobial resistance and emergence of multi-drug resistant pathogens [16].

The existing literature provides important information on the breadth of health factors that are likely to be associated with SAH or SM. A growing literature shows that respondents tend to evaluate their health and drug prescription differently according to several non-health characteristics, including age, gender, education, culture, and personality [17], and failure to account for these factors may bias the estimated associations between health dimensions and SAH or SM. However, it is difficult to draw strong conclusions as to which health factors are most strongly reflected in SAH or SM. Although qualitative studies allow an unrestricted range of health factors to be explored, they rely on respondents being consciously aware of what factors were most important to them when assessing their own health and are restricted to small sample sizes. Quantitative studies have the advantage of much larger sample sizes and the ability to use multiple regression to investigate the relative importance of health factors in assessing one's health.

SAH and SM practices among the general population remains poorly studied. Most of the studies concerning SAH or SM have focused on specific age groups, sex groups, or patient groups. Studies reporting among the general population are very few. Relative to SAH, some indicators provide direct evidence to the health status of individuals, including previous and current diseases (diagnosed by physicians), and clinical parameters measured in the hospital; these have been termed as "actual" or "objective" health. Some health-related factors, such as demographic characteristics, health history, life habit, life stress and work strain, are closely associated with objective health.

The present study would be implemented to estimate the prevalence of SAH and SM and to look for their association with socio-demographic characteristics in parents. Very few studies were conducted at the community level in Greece to assess the magnitude of SRH [18] and SM practices [19,20]. Studies of such nature will provide useful insight on the reasons for which population resort to this practice and might help policy makers and regulatory authorities to streamline the process of drug regulation, updating the list of essential medicines, and safety issues of over-the-counter drugs. Therefore, the current study was conducted to assess and describe the knowledge, attitudes/perceptions, and behaviors/practices on SRH and SM and to characterize the critical risk factors influencing SRH and SM behavior among young parents of children in primary schools in Patras, Greece.

Materials and Methods

Design

A questionnaire-based cross-sectional study was performed. The study was conducted by administering the questionnaire to young parents. The University Institutional Ethical Review Committee of UPAT (10/2018) issued permission to conduct the study. Since the study did not require any clinical intervention and the participants' involvement in the study was clearly below minimal risk, all participants gave informed either verbal or written consent.

Research tool

The research tool was developed previously by the research team. The absence of such tools led to the development and validation of a new tool by the research team which was used in this study [20]. Summarizing, the questionnaire included three parts. Part 1 with sociodemographic data, part 2 included information about the SRH and part 3 with questions on the parents' knowledge and attitudes towards SRH and SM, practice and reasoning of SM.

The survey was provided to young parents in two formats, either as a printed version or through an online platform. The researchers utilized the printed version to conduct in-person interviews with parents in schools, while the online version was shared with social groups Responses were recorded using a Likert scale format: strongly disagree, disagree, agree, and strongly agree.

The survey tool has been reviewed by the researchers for content, clarity, relevance, and intelligibility of the questions [20]. A pilot test of 30 participants was used to assess the questionnaire's validity, Cronbach's alpha was used to estimate the reliability of the responses. Concerning the pilot study, the Cronbach's alpha was 0.82 for knowledge, 0.70 for attitude, and 0.7 for practice, indicating good internal consistency.

Study population

The study sample was determined based on the findings of Ramazani, et al. and calculated using a sample size formula for estimating a proportion. With a desired 95% confidence interval and 0.05 accuracy, the initial estimated sample size was 400 parents, ac-counting for a potential 10% loss. To account for the prevalence rates of self-assessed health (SAH) and Self-Medication (SM) practices, which were found to be 55.9%, and to achieve a relative precision of 10%, the minimum required sample size was recalculated to be 500. Considering a non-response rate of 10%, the final minimum sample size was determined to be 550. Probability proportional to size sampling was employed to select the subjects from all public primary schools of Patras. Stratified random sampling was utilized, using the schools as the sampling class. The percentage of parents selected from each school was determined based on the respective number of parents participated in Parent Association. To facilitate this process, a list of parents in each school was initially obtained and encoded. Overall, the study

employed a combination of sample size calculations, probability proportional to size sampling, and stratified random sampling to ensure an adequate and representative sample for the investigation.

Data collection

Having obtained permission from the ethical committee, the researchers contacted the parent association of primary schools to ask for a parent mail list. Also, the research team, has visited the schools, several times. Parents were clearly explained to the participants and the confidentiality of all questionnaire responses was reassured. Participants were informed that they could withdraw from the study at any point. Incomplete or duplicate responses were excluded. In-person interview data were collected by 2 trained researchers (JV and IC).

Statistical Analysis

Descriptive statistics were employed to summarize the recorded variables. This involved calculating measures such as median and interquartile range to provide an overview of the distribution of each quantitative variable and relative frequencies for qualitative variables. The coefficient of correlation was calculated to assess the relationship between quantitative variables, and the Chi-square test of homogeneity was used to examine whether two subgroups within the population shared the same distribution of a single categorical variable [21]. Comparison among multilevel categorical variables was conducted with Chi-square test or Fisher exact test where p-values were computed by Monte Carlo simulation, using 2000 permutations to obtain a robust assessment of statistical significance [22]. Internal consistency was assessed using Cronbach's alpha and omega coefficient [23]. In all analyses, a p-value less than 0.05 was considered statistically significant. 95% Confidence intervals were calculated via bootstrapping (with 5000 permutations). All answers were recorded in an Excel spreadsheet (Microsoft Office) and statistical analysis was conducted with R Studio (RStudio: Integrated Development for R. RStudio, PBC, Boston, MA, URL http://www.rstudio.com/).

Results

Descriptive statistics

Considering SAH and SM as significant issues in the general population (Montgomery et al 2011), we aimed to determine the prevalence, knowledge's, attitudes, practices and risk factors of SAH and SM in parents from primary schools, in Patras, Greece.

Cronbach's alpha, 95% confidence intervals, omega hierarchical, omega H asymptomatic and omega total coefficients within "child-unwell behavior", "quality of life", "self-medication (for all)", "self-medication (child, condition)", "self-medication (child, kind)", "self-medication (own, kind)", and "self-rated health" are presented in Table 1.

Question category	alpha	95% confidence boundaries*	omega Hierarchical	omega H asymptomatic	omega Total
Child-unwell behavior	0.41	0.32-0.48	0.57	0.97	0.59
Quality of Life	0.93	0.92-0.94	0.85	0.90	0.94
Self-medication (all)	0.85	0.82-0.86	0.56	0.62	0.90
Self-medication (child, condition)	0.61	0.56-0.66	0.41	0.47	0.88
Self-medication (child, kind)	0.64	0.59-0.69	0.51	0.59	0.87
Self-medication (own, kind)	0.63	0.58-0.68	0.49	0.54	0.90
Self-rated health	0.65	0.58-0.7	0.68	0.68	1.00
*Estimated using 5000 permutations					

Table 1: Cronbach's alpha, 95% confidence intervals, omega hierarchical, omega H asymptomatic and omega total.

The total number of parents who answered the questionnaires (printed and electronic) was 567, however 6 were excluded from the current statistical analysis, because of logistic errors emerged or because of missing data. In our statistical analysis, 560 subjects were utilized and all demographic and descriptive data are presented in Table 2.

Characteristic	N = 560
1. Parent's gender	
Female	425 (76%)
Male	135 (24%)
2. Nationality	
Albanian	2 (0.4%)
Bulgarian	2 (0.4%)
Cypriot	2 (0.4%)
German	2 (0.4%)
Greek	550 (98%)
Moldavian	1 (0.2%)
Serbian	1 (0.2%)
3. City of permanent residence	
Ammohostos	4 (0.7%)
Arta	1 (0.2%)
Athens	12 (2.1%)
Corfu	1 (0.2%)
Crete	1 (0.2%)
Dafnoula	2 (0.4%)
Derineia	1 (0.2%)
Drama	1 (0.2%)
Egio	40 (7.1%)
Germany	1 (0.2%)
Herakleio	1 (0.2%)
Ierapetra	2 (0.4%)
Ioannina	2 (0.4%)
Kalavryta	9 (1.6%)
Kamares	4 (0.7%)
Kato Ahaia	17 (3.0%)
Lakopetra	1 (0.2%)
Patera	1 (0.2%)
Patras	452 (81%)
Peiraias	2 (0.4%)

Characteristic	N = 560
Serres	2 (0.4%)
Siteia	1 (0.2%)
Trikala	1 (0.2%)
Zurich	1 (0.2%)
4. Marital status	
Married	490 (88%)
Divorced	50 (9.0%)
Single	8 (1.4%)
Widow	8 (1.4%)
Unknown	4
5. What is your family income?	
<9.000€	79 (17%)
9.000-20.000€	230 (50%)
>20.000€	155 (33%)
Unknown	96
6. What is the highest level of education you have completed?	
High school (3 years)	19 (3.4%)
High school (6 years)	147 (26%)
Higher education (8 years)	84 (15%)
Higher education (10 years)	198 (35%)
Higher education (12 years)	90 (16%)
Higher education (>12 years)	22 (3.9%)
7. How many children do you have?	
1	128 (23%)
2	314 (56%)
3 or more	118 (21%)
8. What is the age of each child?	8.6 (5.7, 12.1)
9. How often does your child engage in physical activity in the last year?	
Never	15 (2.7%)
Occasionally (2/month)	93 (17%)
1 to 3 times per week	377 (67%)
Every day	75 (13%)

Characteristic	N = 560
10. What do you think is the health status of your children in the last year?	
Good	1 (0.2%)
Very good	1 (0.2%)
Moderate	27 (4.8%)
Bad	137 (24%)
Very bad	394 (70%)
11. Has your children experienced any health problems in the last year?	112 (20%)
12. When your children feel unwell, what do you usually do? [Go directly to the doctor/clinic/hospital]	
Never	49 (8.8%)
Rarely	107 (19%)
Sometimes	154 (28%)
Often	134 (24%)
Always	116 (21%)
13. When your children feel unwell, what do you usually do? [Follow telephonic medical guidance]	
Never	19 (3.4%)
Rarely	36 (6.4%)
Sometimes	147 (26%)
Often	193 (34%)
Always	165 (29%)
14. When your children feel unwell, what do you usually do? [Administer medication on your own]	
Never	249 (44%)
Rarely	153 (27%)
Sometimes	122 (22%)
Often	28 (5.0%)
Always	8 (1.4%)
15. When your children feel unwell, what do you usually do? [Ask your friends]	
Never	346 (62%)
Rarely	137 (24%)
Sometimes	67 (12%)
Often	8 (1.4%)
Always	2 (0.4%)
16. When your children feel unwell, what do you usually do? [Search for information on the internet (Google)]	

Characteristic	N = 560
Never	259 (46%)
Rarely	152 (27%)
Sometimes	112 (20%)
Often	28 (5.0%)
Always	9 (1.6%)
17. How many days do you wait before taking your children to the doctor if the symptoms they are experiencing do not improve?	
Not at all	43 (7.7%)
When they change but the symptoms persist	17 (3.0%)
1 to 3 days	424 (76%)
More than 3 days	76 (14%)
18. Does any of your children suffer from a chronic illness?	35 (6.3%)
19. Do you perform preventive check-ups on your children?	
Yes	394 (70%)
Only if the doctor recommends it	160 (29%)
No	6 (1.1%)
20. When was the last time you had preventive check-ups for your children?	
Six months ago	310 (55%)
One year ago	167 (30%)
Two years ago	73 (13%)
Never before	10 (1.8%)
21. Do you consider preventive check-ups necessary for children?	
No	2 (0.4%)
Only if there is a health issue	17 (3.0%)
Only if the doctor recommends them	129 (23%)
Yes	412 (74%)
22. Do you administer medication to your children without a doctor's prescription?	
Never	269 (48%)
Rarely	217 (39%)
Sometimes	65 (12%)
Often	8 (1.4%)
Always	1 (0.2%)
23. What kind of medication do you administer to your children without a doctor's prescription? [Painkillers]	

Characteristic	N = 560
Never	124 (22%)
Rarely	92 (16%)
Sometimes	188 (34%)
Often	106 (19%)
Always	50 (8.9%)
24. What kind of medication do you administer to your children without a doctor's prescription? [Anti-allergic drugs]	
Never	390 (70%)
Rarely	80 (14%)
Sometimes	69 (12%)
Often	15 (2.7%)
Always	6 (1.1%)
25. What kind of medication do you administer to your children without a doctor's prescription? [Antibiotics]	
Never	465 (83%)
Rarely	50 (8.9%)
Sometimes	36 (6.4%)
Often	5 (0.9%)
Always	4 (0.7%)
26. What kind of medication do you administer to your children without a doctor's prescription? [Anxiolytics]	
Never	542 (97%)
Rarely	6 (1.1%)
Sometimes	11 (2.0%)
Often	1 (0.2%)
Always	0 (0%)
27. What kind of medication do you administer to your children without a doctor's prescription? [Decongestants]	
Never	266 (48%)
Rarely	94 (17%)
Sometimes	125 (22%)
Often	56 (10%)
Always	19 (3.4%)
28. How many times in the last six months have you given medication to your children without a doctor's prescription?	

Characteristic	N = 560
I don't give medication without a medical prescription	307 (55%)
One time	134 (24%)
2 to 3 times	107 (19%)
More than 3 times	12 (2.1%)
29. What kind of problems of your children do you address with your own medication? [Pathological (headaches, etc.)]	
Never	134 (24%)
Rarely	118 (21%)
Sometimes	156 (28%)
Often	103 (18%)
Always	49 (8.8%)
30. What kind of problems of your children do you address with your own medication? [Allergic]	
Never	402 (72%)
Rarely	74 (13%)
Sometimes	57 (10%)
Often	19 (3.4%)
Always	8 (1.4%)
31. What kind of problems of your children do you address with your own medication? [Respiratory (colds, asthma, etc.)]	
Never	328 (59%)
Rarely	95 (17%)
Sometimes	95 (17%)
Often	34 (6.1%)
Always	8 (1.4%)
32. What kind of problems of your children do you address with your own medication? [Psychological (anxiety, insomnia, etc.)]	
Never	536 (96%)
Rarely	6 (1.1%)
Sometimes	14 (2.5%)
Often	2 (0.4%)
Always	2 (0.4%)
33. What kind of problems of your children do you address with your own medication? [Gastrointestinal]	
Never	427 (76%)

Characteristic	N = 560
Rarely	73 (13%)
Sometimes	43 (7.7%)
Often	11 (2.0%)
Always	6 (1.1%)
34. Do you read and follow medication instructions?	
Yes	481 (86%)
Occasionally	68 (12%)
No	11 (2.0%)
35. What do you think about self-medication?	
Unacceptable practice	398 (71%)
Acceptable practice	130 (23%)
Good practice	32 (5.7%)
36. Do you take medication without a doctor's prescription?	
Yes	226 (40%)
Occasionally	234 (42%)
No	100 (18%)
37. What kind of medication do you take for yourself without a doctor's prescription? [Painkillers]	
Never	67 (12%)
Rarely	82 (15%)
Sometimes	181 (32%)
Often	144 (26%)
Always	86 (15%)
38. What kind of medication do you take for yourself without a doctor's prescription? [Anti-allergic drugs]	
Never	394 (70%)
Rarely	66 (12%)
Sometimes	65 (12%)
Often	28 (5.0%)
Always	7 (1.3%)
39. What kind of medication do you take for yourself without a doctor's prescription? [Antibiotics]	
Never	453 (81%)
Rarely	59 (11%)
Sometimes	38 (6.8%)

Characteristic	N = 560
Often	7 (1.3%)
Always	3 (0.5%)
40. What kind of medication do you take for yourself without a doctor's prescription? [Anxiolytics]	
Never	521 (93%)
Rarely	20 (3.6%)
Sometimes	17 (3.0%)
Often	2 (0.4%)
Always	0 (0%)
41. What kind of medication do you take for yourself without a doctor's prescription? [Orthopedic ointments]	
Never	183 (33%)
Rarely	119 (21%)
Sometimes	168 (30%)
Often	70 (13%)
Always	20 (3.6%)
42. What do you think is the state of your health in the last year?	
Good	4 (0.7%)
Very good	6 (1.1%)
Moderate	74 (13%)
Bad	269 (48%)
Very bad	207 (37%)
43. Compared to a year ago, how would you rate your health now?	
Much worse now than a year ago	4 (0.7%)
Somewhat worse now than a year ago	61 (11%)
Relatively the same now as a year ago	371 (66%)
Somewhat better now than a year ago	55 (9.8%)
Much better now than a year ago	69 (12%)
44. Do you feel happy?	
Not at all	5 (0.9%)
A little	19 (3.4%)
Moderately	165 (29%)
Very	251 (45%)
Too much	120 (21%)

Characteristic	N = 560
45. Do you feel joyful?	
Not at all	7 (1.3%)
A little	16 (2.9%)
Moderately	176 (31%)
Very	249 (44%)
Too much	112 (20%)
46. Are you a nervous person?	
Not at all	65 (12%)
A little	142 (25%)
Moderately	227 (41%)
Very	91 (16%)
Too much	35 (6.3%)
47. Have you felt that nothing could excite you?	
Not at all	239 (43%)
A little	144 (26%)
Moderately	121 (22%)
Very	42 (7.5%)
Too much	14 (2.5%)
48. Do you feel calm?	
Not at all	12 (2.1%)
A little	50 (8.9%)
Moderately	242 (43%)
Very	205 (37%)
Too much	51 (9.1%)
49. Do you have energy?	
Not at all	5 (0.9%)
A little	30 (5.4%)
Moderately	206 (37%)
Very	215 (38%)
Too much	104 (19%)
50. Have you felt disappointed?	
Not at all	93 (17%)

Characteristic	N = 560
A little	182 (33%)
Moderately	178 (32%)
Very	77 (14%)
Too much	30 (5.4%)
51. Do you feel sad?	
Not at all	137 (24%)
A little	203 (36%)
Moderately	154 (28%)
Very	48 (8.6%)
Too much	18 (3.2%)
52. Do you feel tired?	
Not at all	49 (8.8%)
A little	131 (23%)
Moderately	191 (34%)
Very	130 (23%)
Too much	59 (11%)
53. In the last year, how much did your physical health or emotional problems impede your social activities (such as visiting friends, relatives, etc.)?	
Not at all	205 (37%)
A little	127 (23%)
Moderately	108 (19%)
Very	73 (13%)
Too much	47 (8.4%)
54. How would you rate your quality of life?	
Good	2 (0.4%)
Very good	14 (2.5%)
Moderate	128 (23%)
Bad	295 (53%)
Very bad	120 (21%)
Unknown	1
55. How satisfied are you with your health?	
Not at all	6 (1.1%)
A little	16 (2.9%)

Characteristic	N = 560
Moderately	155 (28%)
Very	287 (51%)
Too much	96 (17%)
56. To what extent do you feel that your physical pain prevents you from doing what you need to do?	
Not at all	156 (28%)
A little	166 (30%)
Moderately	157 (28%)
Very	65 (12%)
Too much	16 (2.9%)
57. How much do you need any medical care to function in your daily life?	
Not at all	319 (57%)
A little	150 (27%)
Moderately	67 (12%)
Very	16 (2.9%)
Too much	8 (1.4%)
58. How much do you enjoy life?	
Not at all	2 (0.4%)
A little	33 (5.9%)
Moderately	182 (33%)
Very	235 (42%)
Too much	108 (19%)
59. To what extent do you feel that your life has meaning?	
Not at all	4 (0.7%)
A little	12 (2.1%)
Moderately	52 (9.3%)
Very	235 (42%)
Too much	257 (46%)
60. How safe do you feel in your daily life?	
Not at all	9 (1.6%)
A little	21 (3.8%)
Moderately	163 (29%)
Very	264 (47%)

Characteristic	N = 560
Too much	103 (18%)
61. How healthy is your physical environment?	
Not at all	4 (0.7%)
A little	10 (1.8%)
Moderately	115 (21%)
Very	278 (50%)
Too much	153 (27%)
62. Do you have enough energy for your daily life?	
Not at all	3 (0.5%)
A little	18 (3.2%)
Moderately	178 (32%)
Very	260 (46%)
Too much	101 (18%)
63. Are you able to accept your physical appearance?	
Not at all	10 (1.8%)
A little	38 (6.8%)
Moderately	126 (23%)
Very	230 (41%)
Too much	156 (28%)
64. Do you have enough money to meet your needs?	
Not at all	19 (3.4%)
A little	69 (12%)
Moderately	274 (49%)
Very	159 (28%)
Too much	39 (7.0%)
65. To what extent do you have the opportunity for leisure activities?	
Not at all	52 (9.3%)
A little	125 (22%)
Moderately	256 (46%)
Very	102 (18%)
Too much	25 (4.5%)
66. How satisfied are you with your sleep?	

Characteristic	N = 560
Not at all	13 (2.3%)
A little	63 (11%)
Moderately	219 (39%)
Very	194 (35%)
Too much	71 (13%)
67. How satisfied are you with your ability to work?	
Not at all	12 (2.1%)
A little	18 (3.2%)
Moderately	104 (19%)
Very	281 (50%)
Too much	145 (26%)
68. How satisfied are you with yourself?	
Not at all	1 (0.2%)
A little	31 (5.5%)
Moderately	142 (25%)
Very	279 (50%)
Too much	107 (19%)

Table 2: Descriptive statistics.

Discussion

Concerning SAH, previous studies have shown that SAH is associated with a wide range of physical and mental health concerns [24,25]. Prior research has also documented that SAH is a stable health outcome measure from adolescence to early adulthood [26]. In our data, only 23% and 53% characterize their life as moderate or bad, respectively, whereas only 21% always and 23% often visited a doctor and the rest either followed telephone medical orders or asked their family. They do not have preventive exams due to main reasons such as financial, lack of time, or "do not feel them necessary".

Prevalence of self-medication has remained common in both developing and developed countries [27] and the trend is increasing among youths and common among young parents. Socioeconomic factors, knowledge, increased medical consultation costs, time-consuming clinical process, past experiences, and extensive advertisement are some of the leading reasons for people e.g. young parents eeking self-medication. In our study, the prevalence of SM (always, often, or sometimes) without a medical prescription was 15.3 with similar prevalence in all primary schools. This could be explained by the fact that young parents, in general, may consider themselves to be as knowledgeable about medicine, or it just may be that do not care much about the implications of such behavior and thus do not hesitate to indulge in such activities(Petrovic et al 2022).

The most frequent types of medication are analgetic, anti-allergics, or antibiotics or orthopedic problems and conditions in which the young parents self-medicate their children were headache, sore throat, intestinal colic, allergies and lastly cramps. The most frequently reported causes of SM were "I have used them for similar symptoms" and the least was "financial reasons". Receiving advice mainly from the family/friends (44.1% for females and 42.9 for males) about SM and the reuse of old prescriptions contributes to the risk posed by home pharmacies. Further explanations for SM cited by parents in this study included "there is no need to see a doctor for my child because of a simple disease" and "quick relief." About 29% of parents in this study considered SM as good or accepted practice; 74.3% were careful when self-medicating and reading the package leaflet of self-medicated drugs. About 28.4% had received antibiotics and the reason was convenience (25%) or distrust of medical advice. Different genders show similar percentages in self-medication..

The prevalence reported in our study is quite significant. It is also worthy to note here that parents belong to general population of society and if the prevalence of self-medication is high, then the prevalence in the rest of the community maybe a significant health issue. Although it is true that SM can help treat minor ailments that do not require medical consultation and hence reduce the pressure on medical services, particularly in underprivileged countries with limited health care resources, the availability of more complex drug groups such as antibiotics without prescription is a source of great concern. Moreover, the practice of SM often has many adverse effects such as the global emergence of Multi-Drug Resistant pathogens, drug dependence and addiction, masking of malignant and potentially fatal diseases, hazard of misdiagnosis problems related to over-and under dosing, drug interactions and tragedies relating to the side effect profile of specific drugs. It was surprising to find that there was no significant difference in the prevalence rates of self-medication amongst different parents .

In the ideal setting, the only justifiable rationale for SM would be 'urgency of the problem' but amongst our participants this was not the most popular reason; 'previous experience with similar symptoms' and 'problem seeming to be too trivial' were also common. Attitudes like these are indeed unfavorable and show that people, are unaware of the gravity of this situation. Even though most people stated that they knew that it may be harmful to self-medicate, this practice shows that they lacked complete knowledge as they also had the same attitude with the use of antibiotics.

Therefore, it needs to notice the significance of these factors on self-related health and self-medication and design health-promoting programs to improve the health outcomes of them. This study suffers some limitations. Firstly, this is a cross-sectional study with the limitation of collecting data on all variables only at a single point in time. Secondly, information bias cannot be excluded since the survey is based on self-reported data regarding activities from the previous 12 months, and it is possible that some incorrect data were given due to forgetfulness (recall bias). The survey was performed at only one institution in the country. In some personal questions, e.g., family income, body weight, etc., several parents did not answer. Another limitation of this study was that we took a convenience sample which is inferior to probability sampling in its representativeness to the rest of the city. However, our sample size was adequate and could balance out this limitation.

The strengths of this study are as follows: (1) it includes a random sample of population of parents from different primary schools of Patras, with a broad range of socioeconomic and educational status in accord with the distribution of local population, which is a better representation of the total population. In contrast, most previous studies focusing on SAH mainly examined older population samples [28,29] or subjects with certain specific diseases [30].The present study investigates the association between SAH and objective health status from multiple dimensions, using a wide range of variables, including the prevalence of diseases, abnormalities in laboratory parameters, and health-related factors.

Author Contributions

Conceptualization, JV and AV.; methodology, J.V. AND I.P.C..; software, J.V. and I.P.C..; validation, J.V., I.P.C. and A.V.; formal analysis, X.X.; investigation, X.X.; re-sources, J.V.; data curation, J.V., I.P.C.; writing—original draft preparation, J.V. and I.P.C.; writing—review and editing, G.D. and C.G.; visualization, A.V.; supervision, A.V.; All authors have read and agreed to the published version of the manuscript."

Institutional Review Board Statement

The study was conducted in accordance with the Declaration of Helsinki and approved by the Ethics Committee of University of Patras (10/2018).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data is unavailable due to privacy.

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References

1. Meer J, Miller DL, and Rosen HS (2003) "Exploring the health–wealth nexus," J. Health Econ. 22: 713–730.
2. Johnson RC (2010) "The health returns of education policies from preschool to high school and beyond," Am. Econ. Rev. 100: 188–194.
3. Contoyannis P and Jones AM (2004) "Socio-economic status, health and lifestyle," J. Health Econ. 23: 965–995.
4. McGarry K (2004) "Health and retirement: do changes in health affect retirement expectations?," J. Hum. Resour. 39: 624–648.
5. Almond D and Mazumder B (2005) "The 1918 influenza pandemic and subsequent health outcomes: an analysis of SIPP data," Am. Econ. Rev. 95: 258–262.
6. Au N and Johnston DW (2014) "Self-assessed health: what does it mean and what does it hide?," Soc. Sci. Med. 121: 21–28.
7. Jylhä M (2009) "What is self-rated health and why does it predict mortality? Towards a unified conceptual model," Soc. Sci. Med. 69: 307–316.
8. Idler EL and Benyamini Y (1997) "Self-rated health and mortality: a review of twenty-seven community studies," J. Health Soc. Behav. 38: 21–37.
9. Idler EL, Russell LB and Davis D, "Survival, functional limitations, and self-rated health in the NHANES I epidemiologic follow-up study, 1992," Am. J. Epidemiol. 152: 874–883.
10. Hughes CM, McElnay JC, and Fleming GF (2001) "Benefits and risks of self medication," Drug Saf. 24: 1027–1037.
11. W. H. Organization (1998) "The Role of the pharmacist in self-care and self-medication: report of the 4th WHO Consultative Group on the Role of the Pharmacist, The Hague, The Netherlands, 26-28 August 1998," in The Role of the pharmacist in self-care and self-medication: report of the 4th WHO Consultative Group on the Role of the Pharmacist, The Hague, The Netherlands, 26-28 August 1998.
12. Montastruc JL, Bagheri H, Geraud T, and Lapeyre-Mestre M (1997) "Pharmacovigilance of self-medication," Therapie. 52: 105–110.
13. Pereira FSVT, Bucaretchi F, Stephan C, and Cordeiro R (2007) "Self-medication in children and adolescents," J. Pediatr. (Rio. J). 83: 453–458.

14. Zafar SN, Syad R, Waqar S, Zubairi AJ, Vaqar T, et al. (2008) "Self-medication amongst university students of Karachi: prevalence, knowledge and attitudes," J. Pak. Med. Assoc. 58: 214-7.

15. Jakovljevic DG (2018) "Physical activity and cardiovascular aging: Physiological and molecular insights," Exp. Geronto. 109: 67–74.

16. Hassan SM (2018) "Prevalence and Determinants of Self-Medication with Antibiotics in high and low-income areas within Cairo".

17. Stevens KB, Gilbert M, and Pfeiffer DU (2013) "Modeling habitat suitability for occurrence of highly pathogenic avian influenza virus H5N1 in domestic poultry in Asia: A spatial multicriteria decision analysis approach," Spat. Spatiotemporal. Epidemiol. 4: 1–14.

18. Zavras D, Tsiantou V, Pavi E, Mylona K, and Kyriopoulos J (2013) "Impact of economic crisis and other demographic and socio-economic factors on self-rated health in Greece," Eur. J. Public Health. 23: 206–210.

19. Papakosta M, Zavras D, and Niakas DD (2014) "Investigating factors of self-care orientation and self-medication use in a Greek rural area," Rural Remote Health. 14: 2349.

20. Velissari J, Psilopoulou M, Chatziprodromidou I, and Vantarakis A (2023) "Development and validation of the self-rated health and self-medication questionnaire for adults in Greece," J. Community Med. Heal. Res. 5: 1-8.

21. Kendall MG (1938) "A new measure of rank correlation," Biometrika. 30: 81–93.

22. Fisher RA (1922) "On the interpretation of χ 2 from contingency tables, and the calculation of P," J. R. Stat. Soc. 85: 87–94.

23. Revelle W and Condon DM (2019) "Reliability from α to ω: A tutorial," Psychol. Assess. 31: 1395-1411.

24. Craig BA, Mortaon DP, Morey PJ, Kent LM, Gane AB, et al. (2018) "The association between self-rated health and social environments, health behaviors and health outcomes: a structural equation analysis," BMC Public Health. 18:440.

25. Chen D and Yang T-C (2014) "The pathways from perceived discrimination to self-rated health: An investigation of the roles of distrust, social capital, and health behaviors," Soc. Sci. Med. 104: 64–73.

26. Vie TL, Hufthammer KO, Holmen TL, Meland E, and Breidablik HJ (2018) "Is self-rated health in adolescence a predictor of prescribed medication in adulthood? Findings from the Nord Trøndelag Health Study and the Norwegian Prescription Database," SSM-Population Heal. 4: 144–152.

27. Maass R, Kloeckner CA, Lindstrøm B, and Lillefjell M (2016) "The impact of neighborhood social capital on life satisfaction and self-rated health: A possible pathway for health promotion?," Health Place. 42: 120–128.

28. Kaplan G, Barell V, & Lusky A (1988) "Subjective state of health and survival in elderly adults," J. Gerontol. 43: S114-20.

29. Ferraro KF (1980) "Self-ratings of health among the old and the old-old," J. Health Soc. Behav. 24: 377–383.

30. Ruo B, Bertenthal D, Sen S, Bittner V, Ireland CC, et al. (2006) "Self-rated health among women with coronary disease: depression is as important as recent cardiovascular events," Am. Heart J. 152: 921-e1.