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The Role of Sanitary Knowledge in Increasing Screening and Vaccination Rates

Applied Economics Final Project

Federica Maffei, Stefano Sperti, Cecilia Zannotti

1 Introduction

Many preventive health measures exist, such as screening tests, vaccinations. These tools can detect and potentially prevent a wide range of diseases. However, despite their availability, participation rates remain one of the issues to be addressed. This report presents the findings of an econometric experiment designed to investigate the relationship between an individual's level of sanitary knowledge and their decision to participate in preventive healthcare practices. We chose to address this research question because it is a significant issue in Europe: the declining belief in the effectiveness of vaccination rates [DGHFS, 2019] and the fact that screening decreases massively the deaths rate of cancer [Kowalski and Wilensky, 2021].

In particular, [Filia et al., 2014] and [European Centre for Disease Prevention Control, 2019] highlight that Italy has long been at the top of the European rankings regarding tetanus cases. Nearly one out of every two cases (44.3%) of tetanus, counted between 2013 and 2017, occurred along the Peninsula. Many studies have already been carried out on this topic, in United States [jun Lu et al., 2017] reports that in a sample of the population the awareness of tetanus vaccine is 86.3% and for HPV vaccine is only 59.6%. In particular being female, being a college graduate and working as a health care provider were significantly associated with a higher level of awareness for majority of corresponding vaccines.
Another illness that can be fought with a vaccine is HPV, which has a significant impact on females. Specifically, [Blödt et al., 2012] studied the awareness of the HPV vaccine among 18-25-year-old male and female students in Berlin. Their findings revealed that only half of the women and 25% of men were aware of HPV .

We also decided to address the issue of how the level of health literacy influences screening participation. Cancer is the second leading cause of death in the EU, with 3.2 million European citizens diagnosed with cancer every year. However, thanks to oncological screenings, cancer can be detected earlier, enabling interventions in the early stages and improving the chances of patient recovery. In particular, [Okobia et al., 2006] studied the knowledge, attitude and practices of a sample of Nigerian women towards breast cancer. The results led to a mean knowledge score below the half, significantly influenced by the level of education. An important tool for breast cancer is mammography, which is essential for early detection. It can significantly improve treatment outcomes and reduce mortality rates.

Similarly, testicular ultrasound is a valuable diagnostic tool used to evaluate the presence and severity of varicoceles. Early detection of varicoceles can prompt intervention, such as surgical repair, if necessary, to alleviate symptoms and prevent potential complications, such as infertility.

Screening tests, vaccination campaigns and regular medical visits are key components of preventive healthcare strategies. If there are such powerful tools, why do not people take advantage of them? Is it because it is well-known about them but still it is believed that they cannot make any difference, or is it because people do not know about probable consequences of certain diseases and about the opportunity to avoid them?
Understanding the barriers to preventive healthcare is crucial for designing effective interventions.

2 Methodology

In this section, we will first outline the ideal experiment we envisioned to address our research question. We will then explain the limitations that prevent us from conducting this ideal experiment and detail the feasible design we adopted instead. Finally, we will describe the data collection process for our chosen design.

2.1 Ideal Experiment

The ideal experiment involves two identical populations with comparable knowledge in medical prevention and medical science. In one population, individuals are forced to participate in a one-hour session that explains common illnesses, their prevention strategies, and relevant information. The other population does not receive any intervention. After a three-year period (considered a reasonable duration to observe potential increases in medical prevention visits), we will compare the outcomes between the group that received the educational session and the one that did not. Participant dropout over the course of a three-year study can introduce bias and undermine the reliability of the data. Moreover, external factors like health campaigns or legal changes during the study period could confound the results, making it difficult to isolate the true impact of the intervention.

2.2 Experiment design

We created a small experiment to deal with this problem. In order to collect data for our purpose we prepared a questionnaire with and without a treatment. Firstly we selected 5 diseases to test.

1. Brest cancer (only for females): it can be checked in advance by screening test so to stop its developing when still of small size and taking regular gynecological visits.

2. Varicoceles (only for males): it can be discovered in advance during urological visits.

3. Vaccine for tetanus: it is suggested to be renovated every 10 years; this choice was interesting for us since this vaccine was not compulsory until the 70's while it is now, we might have noticed different effects according to the age.

4. HPV vaccine: it has recently come out a self-taking vaccine available in every pharmacy, therefore the general prior knowledge about it is supposed to still be very low.

5. Finally we decided to include an invented disease; we made up the ocotopatite ghiandolare, a glandular infection that can be easily checked by means of saliva tests; the choice was made in order to highlight the possible effect of the treatment.

Note: each individual face questions on 4 diseases since number 1. and 2. are delivered according to the gender of the individual.

In our data collection procedure, we utilized Qualtrics to create tailored questionnaires for men and women, ensuring a more targeted approach to capturing specific health concerns pertinent to each

gender. We used WhatsApp as the main instrument for dissemination, sending the questionnaire to friends of friends and relatives. This could potentially create a problem with external validity since the subpopulation considered is more educated than the average population in Italy.

The introductory section of the questionnaire (Appendix A) follows a standardized format for all participants, gathering demographic information such as Age, Gender, Education, and Occupation. These details serve as essential controls in subsequent regression analyses. Additionally, we collected data on general body health factors, including blood test frequency, alcohol consumption, smoking habits, and fitness levels. These informations could mitigate any potential biases arising from individuals' prior knowledge or habits, ensuring a more accurate assessment of their willingness to make decisions regarding testing or vaccine.

The treatment allocation is randomized and involves providing information about each disease immediately before the corresponding question (Appendix B). This information includes the disease incidence rate, potential fatality rate, implications for personal health, risk of contagion, as well as preventive measures and early detection methods. This strategic provision of information aims to enhance respondents' understanding and awareness of the diseases under investigation.

2.3 Data collection

We collected 282 responses to the questionnaire. However, we had to remove 19 entries because the questionnaire was incomplete after receiving the treatment. Then, the data were cleaned by removing irrelevant information stored by Qualtrics. We created three boolean variables for medical workers, workers, and students because most responses fell into these categories.
After cleaning the data, we had 131 treated and 132 untreated cases. Additionally, some entries had missing values for smoking and alcohol consumption, possibly because people chose not to answer. Despite this, we kept these observations for regression analysis, excluding these variables when necessary.
We noticed that the variable 'Papilloma Virus' was not ordinal, making it unsuitable for regression analysis. Consequently, we decided to create a dummy variable. This dummy will convey whether individuals have a strong or weak intention to vaccinate, or no intention at all, given that they have not been vaccinated. We excluded a sizable subsample of our dataset consisting of previously vaccinated individuals for avoiding possible bias in the estimation procedure.

Firstly, we created a summary of the most important descriptive statistics for women (Table 1), men (Table 2) and both (Table 3). For each of them we computed Minimum, Median, Mean, Max and numbers of NA. Secondly, in order to check the "ceteris paribus condition" for our experiment we initially plotted all the controls for treated and untreated, so that we had a visual comparison. We reported some examples: in Figure 1 there is a comparison between women health for treated and untreated, in Figure 2 the histograms represent the data of the testicular ultrasound for men, treated and untreated, and in Figure 3 there is a comparison between the variable "Smoke" both for men and women, treated and untreated groups. Lastly, we checked the randomization effectiveness by the t-test for the differences in means: the null hypothesis consists of a zero difference between the means of each variable for treated and untreated groups. In Table 4, Table 5 and Table 6 we have represented all the p-values for respectively women, men and total population. From these values we can assert that there is no difference in means for treated and untreated at the significance level of 0.1: all the p-values are very high, which leads not to reject the null hypothesis.

3 Results

In this analysis, we explore how public awareness on various diseases increased and how the availability of screening tests influences people decisions to undergo preventive measures like screenings or vaccinations. Through STATA we have implemented regression models on the collected data in order to assess whether the information effect, captured by the "Treatment" variable, differs across disease types. For each disease, we employed different models: a full model encompassing all relevant control variables, a reduced model focusing solely on the "Treatment" variable, and two models incorporating some control variables identified in the full model.

Breast Cancer: Refer to Table 7. The regression analysis yields unremarkable results regarding the increase in information about Breast Cancer and the Mammography test on the intention to take a mammogram in the following two years, likely attributed to the already high level of awareness among the women in the studied population. Indeed the high level of knowledge is captured by the constant, which represents the "innate" awareness when all the controls are set at zero. This is in contrast with the findings in other articles such as [Okobia et al., 2006], where populations with lower education levels and limited access to healthcare facilities exhibited more significant results. In our data we have excluded 26 individuals who reported that where not in the correct age for doing the screening, with only 14 out of 26 receiving treatment. Notably, age, education and smoke emerge as significant controls (respectively at 0.01, 0.01 and 0.05 significant level), indicating their influence on mammography intentions. It is reasonable to assume that age could further elucidate intentions, given that breast cancer incidence is higher in adulthood. Although in our sample very few people smoke, it may be important to consider it as a risk factor when assessing the risk of breast cancer. If a woman has a high knowledge about vaccines and often undergoes gynecological visits, she is very likely also to undergo mammograms. For this reason the two variables in question have significance on mammography. All these results are perfectly coherent with the findings of [Giorgi Rossi et al., 2018].

Varicoceles: Refer to Table 8. Once again, no evident effects of the treatment were observed. However, it is crucial to highlight the significance of engaging with the medical system *MedWork control* and having previously undergone testicular examinations *TUltrasound control*, which has an impact on the dependent variable at a 5% level of significance. This suggests a potential lack of awareness regarding preventive measures within the male population. Notably, individuals who have previously undergone these tests are more inclined to continue monitoring their health, possibly indicating underlying concerns that persist over time.

Tetanus: Refer to Table 9. We can observe a positive effect of the treatment on the inclination towards vaccination. This could be attributed to the low level of tetanus awareness in Italy, as highlighted by [European Centre for Disease Prevention Control, 2019]. This idea that the effect could be related to vaccine awareness contrasts with findings in America by [jun Lu et al., 2017], where almost the entire population was aware of the tetanus vaccine. A different scenario is presented in India, as shown in [Chowdhury et al., 2019], with a low level of awareness in the population. All these studies in various countries agree with our result that as people age, their willingness to vaccinate against tetanus decreases, as indicated by the statistically significant negative coefficient for age at a level of 1%. Notably, individuals working in the medical field, who are more familiar with this illness, show a higher inclination towards vaccination. This regression is particularly interesting, as the inclusion of control variables representing pre-existing health and knowledge about tetanus significantly improves the treatment coefficient from a 10% level to a 5% level of rejection of the null hypothesis that it can be 0.

HPV Virus: Refer to Table 10. In our initial study, we discovered that the treatment had no impact on the intention to receive vaccinations, with results varying significantly based on gender. Significantly, legislation strongly encourages young girls to receive the Papilloma virus vaccine, leading to a notably high vaccination rate among female participants. Consequently, we believe that our results lack of significance. Consequently, we focused our investigation solely on the male segment of the population (see Table 11). However, we still found no evidence of any discernible effect, likely due to the widespread belief that Papilloma virus primarily affects women. This crucial issue is further emphasized by the findings of [Blödt et al., 2012].

Ocotopatite Ghiandolare: Refer to Table 12. This fictitious illness yields the most significant results, given the uniform prior knowledge among all participants. Notably, there were no preconceived beliefs regarding this invented condition, minimizing potential biases from adverse symptoms of vaccines or invasive tests. Consequently, we observed a high level of significance in the regression coefficient for the treatment variable, with the remaining variables exhibiting lower importance. Specifically, we were able to reject the null hypothesis of no effect with a p-value of 1%. Moreover, as we expected, the marginal difference between the coefficients for Treatment in both the long and short regressions suggests the absence of omitted variable bias. This is attributed to the effective randomization process, as demonstrated in Table 6. Therefore, we infer that the administered treatment has influenced participants' intent to undergo saliva tests.

4 Conclusion

In summary, our analysis aimed to explore how sanitary awareness and the availability of screening tests influence individuals' decisions regarding preventive measures like screenings or vaccinations. We found that individuals with no prior knowledge about a disease were highly influenced to consider preventive measures (screenings or vaccinations) after receiving basic information about the illness and its prevention strategies. This effect was particularly pronounced for a fictional disease we created. Interestingly, for diseases related to sensitive body parts, we observed no significant difference in the decision-making patterns of men and women. Instead, a history of specialist visits in that particular area emerged as the key factor influencing preventive behavior. Regarding vaccinations, only tetanus showed a statistically significant correlation with increased uptake based on information provision.

In conclusion, our study highlights the crucial role of health awareness in promoting preventive health behaviors. While basic information can significantly influence intentions in simple or well-known cases, addressing more complex conditions, such as those related to people's morals or intimacy, requires additional strategies beyond mere knowledge dissemination.

5 Tables

Table 1: Descriptive statistics for women

Variable	**Min**	**Median**	**Mean**	**Max**	**NA's**
Age	1.00	3.00	4.02	7.00	0
Education	1.000	3.000	2.894	6.000	0
Occupation	1.000	2.000	4.026	9.000	0
BloodTest	1.000	2.000	2.536	4.000	0
Smoke	1.000	5.000	4.638	5.000	2
Alcohol	1.000	2.000	2.655	5.000	3
Drug	1.00	5.00	4.89	5.00	6
Fitness	1.000	3.000	2.636	5.000	0
Health	0.000	4.000	3.651	5.000	2
KnowledgeVaccine	2.000	3.000	2.603	3.000	0
Gynaecology	1.000	3.000	2.49	4.000	2
MammographyIntention	1.000	4.000	3.576	6.000	0
Treatment	0.000	1.000	0.543	1.000	0
Student	0.000	0.000	0.4437	1.000	0
MedicalWorker	0.00000	0.00000	0.03974	1.00000	0
Worker	0.0000	0.0000	0.3642	1.0000	0

Table 2: Descriptive statistics for men

Variable	**Min**	**Median**	**Mean**	**Max**	**NA's**
Age	2.000	3.000	4.036	7.000	0
Education	1.000	3.000	2.938	6.000	0
Occupation	1.000	1.000	3.545	9.000	0
BloodTest	1.000	3.000	2.652	4.000	2
Smoke	1.000	5.000	4.600	5.000	0
Alcohol	1.000	2.000	2.336	5.000	2
Drug	1.000	5.000	4.622	5.000	1
Fitness	1.000	3.000	2.946	5.000	0
Health	0.000	4.000	3.917	5.000	3
KnowledgeVaccine	1.000	2.000	2.441	3.000	1
TesticularUltrasound	1.000	1.000	1.297	4.000	1
TesticularIntention	1.000	1.000	2.315	5.000	1
Treatment	0.000	0.000	0.4375	1.000	0
Student	0.000	1.000	0.5179	1.000	0
MedicalWorker	0.000	0.000	0.008929	1.000	0
Worker	0.000	0.000	0.3125	1.000	0

Table 3: Descriptive statistics for women and men

Variable	**Min**	**Median**	**Mean**	**Max**	**NA's**
Age	1.000	3.000	4.027	7.000	0
Gender	1.000	2.000	1.574	2.000	0
Education	1.000	3.000	2.913	6.000	0
Occupation	1.000	2.000	3.821	9.000	0
BloodTest	1.000	3.000	2.586	4.000	0
Smoke	1.000	5.000	4.622	5.000	4
Alcohol	1.000	2.000	2.519	5.000	5
Drug	1.000	5.000	4.773	5.000	7
Fitness	1.000	3.000	2.768	5.000	0
Health	0.000	4.000	3.764	5.000	5
KnowledgeVaccine	1.000	3.000	2.534	3.000	1
InventedInjury	1.000	2.000	2.171	4.000	0
PapillomaVirus	1.000	2.000	2.544	5.000	0
Tetanus	1.000	4.000	3.901	5.000	0
Treatment	0.000	0.000	0.4981	1.000	0
Student	0.0000	0.0000	0.4753	1.0000	0
MedicalWorker	0.00000	0.00000	0.02662	1.00000	0
Worker	0.0000	0.0000	0.3422	1.0000	0

Table 4: p-value of the t-test for the difference in means (women)

Variable	**p-value**
Age	0.4626
Education	0.2878
Occupation	0.7305
Blood Test	0.2814
Smoke	0.6344
Alcohol	0.5105
Drug	0.8360
Fitness	0.3495
Health	0.3655
Gynaecology	0.7677

Table 5: p-value of the t-test for the difference in means (men)

Variable	**p-value**
Age	0.6624
Education	0.8211
Occupation	0.4132
Blood Test	0.8619
Smoke	0.9378
Alcohol	0.3515
Drug	0.1163
Fitness	0.3036
Health	0.6313
TUltrasound	0.6097

Table 6: p-value of the t-test for the difference in means (men and women)

Variable	**p-value**
Age	0.4058
Education	0.4735
Occupation	0.7199
Blood Test	0.4494
Smoke	0.7139
Alcohol	0.1989
Drug	0.1115
Fitness	0.2682
Health	0.2149
KnowV	0.2240

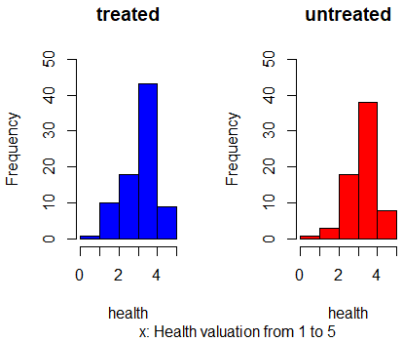

Figure 1: Health variable for women (treated and untreated)

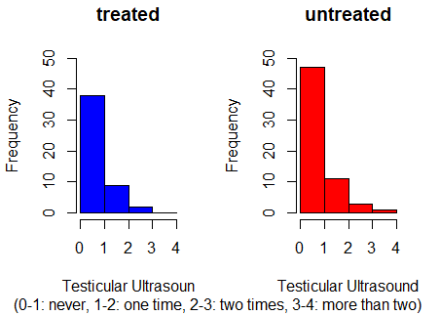

Figure 2: Testicular ultrasound for men (treated and untreated)

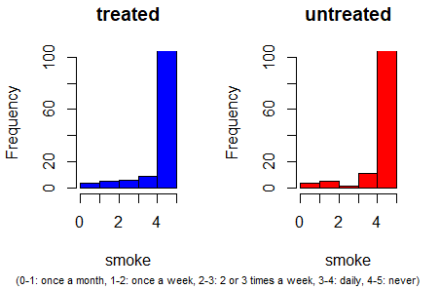

Figure 3: Smoke variable for men and women (treated and untreated)

Table 7: Regression table Brest Cancer

	(1) MamInt	(2) MamInt	(3) MamInt	(4) MamInt
Treatment	0.148	0.119	0.143	0.261
	(0.159)	(0.142)	(0.146)	(0.204)
Age	0.349***	0.346***	0.362***	
	(0.124)	(0.0526)	(0.0512)	
Education	−0.207***	−0.243***	−0.252***	
	(0.0776)	(0.0730)	(0.0753)	
Student	0.142			
	(0.433)			
MedWorker	−0.0787	−0.186	−0.156	
	(0.363)	(0.381)	(0.361)	
Worker	0.198			
	(0.220)			
BloodTest	−0.0701			
	(0.0748)			
Smoke	0.209**	0.198**	0.196**	
	(0.0917)	(0.0859)	(0.0826)	
Alcohol	0.0302			
	(0.0678)			
Drug	−0.188			
	(0.138)			
Fitness	0.0318			
	(0.0922)			
Health	−0.0569			
	(0.119)			
KnowV	0.330**	0.297*		
	(0.165)	(0.166)		
Gynaecology	0.167	0.225*	0.286**	
	(0.134)	(0.130)	(0.124)	
Constant	0.882	−0.00479	0.575	2.930***
	(1.049)	(0.540)	(0.401)	(0.158)
Observations	115	122	122	125

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 8: Regression table Varicocele

	(1) Testicular	(2) Testicular	(3) Testicular	(4) Testicular
Treatment	0.346	0.438	0.338	0.362
	(0.317)	(0.292)	(0.292)	(0.289)
Age	−0.213	−0.0333	−0.0481	
	(0.160)	(0.0793)	(0.0791)	
Education	0.0996	0.119	0.168	
	(0.202)	(0.179)	(0.174)	
Student	−0.905			
	(0.856)			
MedWorker	1.231*	1.597***	1.464***	
	(0.679)	(0.331)	(0.297)	
Worker	−0.222			
	(0.626)			
BloodTest	0.0786	0.0816		
	(0.149)	(0.134)		
Smoke	0.0270			
	(0.184)			
Alcohol	−0.0892			
	(0.156)			
Drug	−0.158	−0.120		
	(0.145)	(0.136)		
Fitness	−0.0500	−0.0603		
	(0.158)	(0.143)		
Health	−0.0180			
	(0.220)			
KnowV	−0.0922			
	(0.327)			
TUltrasound	0.538**	0.508**	0.478**	
	(0.254)	(0.231)	(0.235)	
Constant	3.600*	1.732	1.241*	2.159***
	(2.085)	(1.046)	(0.717)	(0.198)
Observations	105	109	110	111

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 9: Regression table Tetanus

	(1) Tetanus	(2) Tetanus	(3) Tetanus	(4) Tetanus
Treatment	0.390**	0.262*	0.251*	0.303**
	(0.158)	(0.152)	(0.152)	(0.154)
Age	−0.132	−0.214***	−0.206***	
	(0.0876)	(0.0447)	(0.0436)	
Gender	0.151	0.123	0.143	
	(0.170)	(0.155)	(0.154)	
Education	−0.0525	−0.122	−0.126	
	(0.0843)	(0.0800)	(0.0788)	
Student	0.571			
	(0.391)			
MedWorker	1.256***	1.041***	1.047***	
	(0.286)	(0.251)	(0.258)	
Worker	0.261			
	(0.280)			
BloodTest	−0.105	−0.0535		
	(0.0727)	(0.0710)		
Smoke	0.0726	0.0506		
	(0.0779)	(0.0750)		
Alcohol	−0.0976			
	(0.0631)			
Drug	−0.0301			
	(0.0920)			
Fitness	0.0314			
	(0.0871)			
Health	−0.000887			
	(0.0970)			
KnowV	0.104	0.109	0.123	
	(0.156)	(0.154)	(0.152)	
Constant	3.851***	4.510***	4.551***	3.750***
	(0.941)	(0.594)	(0.435)	(0.110)
Observations	246	258	262	263

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 10: Regression table HPV Virus

	(1) PapillomaV	(2) PapillomaV	(3) PapillomaV	(4) PapillomaV
Treatment	0.0541	0.115	0.136	0.0878
	(0.183)	(0.178)	(0.177)	(0.182)
Age	0.00765	0.00632	0.164***	
	(0.112)	(0.0966)	(0.0485)	
Gender	−0.794***	−0.792***	−0.718***	
	(0.195)	(0.187)	(0.184)	
Education	−0.0441	−0.0274	0.0108	
	(0.0948)	(0.0916)	(0.0911)	
Student	−0.680	−0.659*		
	(0.541)	(0.357)		
MedWorker	0.142	0.0964	0.170	
	(0.670)	(0.607)	(0.574)	
Worker	−0.0541			
	(0.336)			
BloodTest	0.156*	0.0967		
	(0.0838)	(0.0828)		
Smoke	−0.0187			
	(0.102)			
Alcohol	0.111			
	(0.0780)			
Drug	−0.00312			
	(0.0921)			
Fitness	0.0407			
	(0.0917)			
Health	−0.0841	−0.108		
	(0.112)	(0.105)		
KnowV	−0.169	−0.168	−0.213	
	(0.176)	(0.178)	(0.178)	
Constant	3.435***	3.874***	2.735***	2.500***
	(1.191)	(0.917)	(0.521)	(0.127)
Observations	246	257	262	263

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 11: Regression table HPV Virus (males only)

	(1) Papilloma	(2) Papilloma
Treatment	−0.0955	−0.0573
	(0.1000)	(0.0981)
Age	0.0387	
	(0.0264)	
Education	−0.0508	
	(0.0488)	
Health	−0.0511	
	(0.0682)	
KnowledgeVaccine	−0.137	
	(0.0935)	
Constant	1.238***	0.685***
	(0.395)	(0.0639)
Observations	93	97

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 12: Regression table Ocotopatite Ghiandolare

	(1) Invented	(2) Invented	(3) Invented	(4) Invented
Treatment	0.271***	0.238***	0.238***	0.222***
	(0.0900)	(0.0876)	(0.0856)	(0.0837)
Age	−0.000317	−0.00739	−0.00613	
	(0.0477)	(0.0456)	(0.0261)	
Gender	−0.0315	−0.0287	−0.0340	
	(0.0937)	(0.0914)	(0.0880)	
Education	0.0801	0.0748	0.0659	
	(0.0501)	(0.0485)	(0.0472)	
Student	0.138	0.101		
	(0.219)	(0.204)		
MedWorker	0.172	0.169	0.0445	
	(0.367)	(0.361)	(0.353)	
Worker	0.188	0.177		
	(0.148)	(0.141)		
BloodTest	−0.0457			
	(0.0455)			
Smoke	−0.0361			
	(0.0354)			
Alcohol	−0.0196			
	(0.0377)			
Drug	−0.0526			
	(0.0382)			
Fitness	−0.0342			
	(0.0419)			
Health	0.0361	0.0216		
	(0.0631)	(0.0558)		
KnowV	−0.118	−0.119	−0.114	
	(0.0898)	(0.0895)	(0.0893)	
Constant	2.521***	1.982***	2.192***	2.061***
	(0.529)	(0.480)	(0.276)	(0.0577)
Observations	246	257	262	263

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

A Questionary

General Data

Q1. Quanti anni hai?

1. 15-18
2. 18 - 22
3. 23 - 25
4. 25 - 29
5. 30 - 49
6. 50 - 69
7. 70+

Q2. Qual è il suo genere?

1. Maschio
2. Femmina
3. Genere non-binario / Terzo genere
4. Preferisco non dirlo

Q3. Qual è il Suo livello di istruzione?

1. Inferiore alla scuola superiore
2. Diploma di scuola superiore
3. Laurea triennale
4. Laurea magistrale
5. Diploma professionale
6. Dottorato

Q4. Qual'è la sua attuale occupazione (settore)?

1. Studente
2. Impiegato (settore pubblico)
3. Impiegato (settore privato)
4. Lavoro nel settore medico
5. Disoccupato
6. In pensione
7. Imprenditore/lavoratore in proprio
8. Fuori dalla forza lavoro
9. Altro

Q5. Con quale frequenza effettua gli esami del sangue?

1. più di una volta l'anno
2. una volta l'anno
3. una volta ogni due anni

4. meno di una volta ogni due anni

Q6. Con quale frequenza fa uso di queste sostanze? (Fumo, Alchool, Sostanze stupecefienti)

1. Una volta al mese
2. Una volta alla settimana
3. 2 o 3 volte alla settimana
4. Quotidianamente
5. Mai

Q7. Con quale frequenza effettua attività fisica?

1. Mai
2. Una volta alla settimana
3. 2 o 3 volte alla settimana
4. 4 o 6 volte alla settimana
5. Quotidianamente

Q8. Su una scala da 1 a 5, come valuteresti la tua salute attuale?

1. 0
2. 1
3. 2
4. 3
5. 4
6. 5

Q9. Sei a conoscenza dei vaccini che hai effettuato nel corso della tua vita?

1. Per nulla
2. Ho una vaga idea
3. Perfettamente

Q10. Quante volte hai effettuato una visita ginecologica?

1. Non ho mai effettuato questa visita
2. Meno di una volta all'anno
3. Una volta l'anno
4. Due volte o più all'anno

Q11. Quante volte hai effettuato una ecografia testicolare negli ultimi 3 anni?

1. Non ho mai effettuato questo test
2. Una volta
3. Due volte
4. Due volte o più

Effects of Treatment

V1. Ha intenzione di effettuare una ecografia testicolare?

1. Non ho intenzione di effettuarlo
2. Sono abbastanza convinto di farlo nel prossimo anno
3. Sicuramente lo farò nel prossimo anno
4. Sono abbastanza convinto di farlo nei prossimi 3 anni
5. Sicuramente lo farò nei prossimi 3 anni

V2. Ha intenzione di fare una mammografia nei prossimi due anni?

1. Non ho intenzione di effettuarla
2. Forse
3. Sono abbastanza convinta di farla
4. Sicuramente lo farò
5. Non sono nella fascia d'età per farla

V3. Ha intenzione di effettuare un campionamento salivare nei prossimi 2 anni?

1. Assolutamente no
2. Probabilmente no
3. Probabilmente sì
4. Assolutamente sì

V4. Hai intenzione di effettuare il vaccino per il papilloma virus?

1. Ho già effettuato il vaccino
2. Non ho effettuato il vaccino e non voglio farlo
3. Non ricordo se ho effettuato il vaccino ma controllorò
4. Non ricordo e non sono interessato a controllare
5. Non l'ho fatto ma vorrei farlo

V5. Hai intenzione di fare il richiamo del tetano nei prossimi anni?

1. NO
2. Probabilmente no
3. Forse
4. Probabilmente sì
5. Sì

B Tretment

Il varicocele è un'anomala dilatazione varicosa delle vene del testicolo. Colpisce circa il 10-20% della popolazione maschile, determina un'alterazione del numero e della motilità degli spermatozoi, con conseguente infertilità. Il varicocele molto spesso è asintomatico ed inizia a manifestarsi più frequentemente nell'età dello sviluppo puberale, tra gli 11 e i 16 anni. Sono più soggetti gli individui che abitano città inquinate. La diagnosi viene posta, in primo luogo, con la visita andrologica, ma

molto importante è prima anche l'autopalpazione. Una diagnosi e un trattamento precoci possono garantire il mantenimento o il recupero della fertilità. È dunque consigliato effettuare controlli andrologici periodici.

Il rischio di ammalarsi nel corso della vita di tumore mammario è pari a circa il 65%. Una diagnosi precoce è oggi sempre più frequente grazie ai programmi di screening e può diminuire del 40% la mortalità per questa malattia. Circa 9 donne su 10 (87%) sono vive dopo 5 anni dalla diagnosi di tumore mammario e 8 su 10 (80%) lo sono a 10 anni dalla diagnosi. La prevenzione del tumore del seno deve cominciare a partire dai 20 anni di età con controlli annuali del seno eseguiti da uno specialista senologo, affiancati agli esami gratuiti mammografia biennale tra i 50 e i 69 anni o all'ecografia, ma solo in caso di necessità. Inoltre l'autopalpazione è un esame che ogni donna può effettuare comodamente a casa propria: permette di cogliere precocemente cambiamenti nelle mammelle.

L'ocotopatite ghiandolare è causata dagli ocotocilli, batteri che si sviluppano principalmente nelle stagioni calde in condizioni di disidratazione. La presenza del batterio provoca la formazione di vescicole che espandendosi portano all'isolamento della ghiandola. Il processo è asintomatico e continua fino a provocare malfunzionamento o interruzione del funzionamento ghiandolare con conseguenti scompensi e inattività ormonali. Nonostante asintomatica l'ocotopatite ghiandolare è diagnosticabile tramite analisi di campioni salivari. L'esame è offerto su campionamento ed è consigliato effettuare controllo ogni 2 anni.

Il papilloma virus (HPV) è un virus comune che può causare la comparsa di verruche sugli organi genitali maschili e femminili e papillomi cutanei. È principalmente trasmesso attraverso il contatto diretto con la pelle infetta o le mucose genitali durante l'attività sessuale. L'HPV è ritenuto responsabile di quasi il 90% dei tumori dell'ano, del 78% dei tumori della vagina e del 51% dei tumori del pene nell'uomo. Il preservativo non è considerato uno strumento di prevenzione dell'infezione da HPV, pertanto si considera la vaccinazione l'unica forma di prevenzione disponibile. La vaccinazione è disponibile in due dosi ed è reperibile in farmacia. In Italia, la vaccinazione anti-HPV è fortemente raccomandata.

Il tetano è una malattia infettiva acuta non contagiosa. Il batterio penetra nell'organismo umano attraverso ferite dove si trasforma in forme vegetative che producono una tossina che raggiunge attraverso il sangue e il sistema linfatico il sistema nervoso centrale, interferendo con il rilascio di neurotrasmettitori che regolano la muscolatura causando contrazioni e spasmi diffusi. La vaccinazione antitetanica conferisce una protezione molto elevata, superiore al 95%. Tuttavia la durata della protezione nel tempo è di 10 anni, è dunque molto consigliato fare richiami periodici.

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