

5.8. The impact of the RHUMART® Auto-Santé™...

The impact of the RHUMART® Auto-Santé™ System on the Frequency of Medical Consultations and Drug Consumption

René Tounissoux, April 1993

Summary

Before purchasing their conditioner, owners of RHUMART Auto-Santé systems consulted physicians much more frequently than did members of the general population (44% more often for general practitioners and 107% more often for specialists). After they had used their system for six months or longer, this frequency had dropped to the point of being significantly lower than that of the general population (13% for general practitioners and 15% for specialists).

If we consider the frequency of medical consultations to be a valid quantitative indication of a person's, or population's, state of health (the sicker the person, the more often they will consult a doctor and vice versa), we can conclude that after six months or more of using a RHUMART auto-santé system, owners enjoy better health than does the average citizen of Quebec.

The fact that they also consume less medication tends to support this conclusion.

Data

This secondary analysis is based on data collected during two surveys conducted by the Centre de recherche sur l'opinion publique (C.R.O.P.) Inc.

The data concerning the owners of RHUMART Auto-Santé Systems was collected during a telephone survey carried out between November 1 – 11, 1991, with a representative sample of 1,001 respondents.⁽¹⁾

The data concerning the frequency of medical consultations for the Quebec population as a whole was collected during a telephone survey carried out between August 21 – 26, 1992, with a representative sample of 961 Quebecers.⁽²⁾

Analysis

We will first compare the frequency with which owners of RHUMART auto-santé systems consulted general practitioners and specialists before starting to use their conditioning system to the frequency with which the Quebec population as a whole consults general practitioners and specialists.

We will then compare the frequency with which owners of RHUMART auto-santé systems consulted general practitioners and specialists after using the conditioning system for six months or longer to the frequency with which the Quebec population as a whole consults general practitioners and specialists.

Finally, we will look at the data comparing the consumption of prescription and non-prescription drugs before and after using the RHUMART conditioner.

* RHUMART is a registered trademark and Auto-Santé is a trademark, both of Free World Trust.

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TABLE 1
 Visits to General Practitioners
 Before Using the RHUMART Auto-Santé System

No. of Visits	RHUMART_Owners		Overall Population	
	People N (%)	Visits N (%)	People N (%)	Visits N (%)
NONE	224 (22)	0 (0)	222 (24)	0 (0)
ONE	166 (17)	166 (5)	305 (32)	305 (14)
TWO	151 (15)	302 (9)	183 (18)	366 (17)
THREE	93 (9)	279 (8)	79 (9)	237 (11)
FOUR	89 (9)	356 (11)	47 (5)	188 (9)
FIVE	33 (3)	165 (5)	15 (1)	75 (3)
SIX	57 (6)	342 (10)	35 (3)	210 (9)
SEVEN – ELEVEN	28 (3)	253 (8)	22 (2)	206 (9)
TWELVE OR MORE	117 (12)	1442 (44)	51 (5)	612 (28)
Don't know/no answer	43 (4)	0 (0)	2 (0)	0 (0)
TOTAL	1001 (100)	3305 (100)	961 (99)	2199 (100)
AVERAGE	$\mu = 3,3$			$\mu = 2,3$
KHI CARRÉ	$X^2 = 96,72$		significant: a = 0,001	

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1. Frequency of Visits to General Practitioners Before Using the RHUMART Auto-Santé System

Since the two survey samples are of similar size, a simple comparison of the total number of medical consultations is meaningful: During the year prior to purchasing a RHUMART auto-santé system, the 1001 RHUMART owners consulted general practitioners a total of 3,305 times, while the 961 members of the general population visited their G.P. 2,199 times. Before starting to use their system, the RHUMART owners thus consulted primary care practitioners 44% more often than did members of the general population.

The number of people who did not consult a G.P. at all during the twelve-month period is almost identical in the two groups: 24% for the general population and 22% for RHUMART owners.

Almost twice as many members of the general population (32%) as RHUMART owners (17%) consulted a G.P. once during the year. A slightly larger percentage of people in the general population (18%) than RHUMART owners (15%) consulted a general practitioner on two separate occasions.

An equal number of RHUMART owners and members of the general population consulted a G.P. three times during the year (9%).

The percentage of people who consulted their physician four or more times during the year was also higher among RHUMART owners than among the general population. Almost a third of RHUMART owners (33%) visited their doctors four or more times during the year, while only 16% of the general population did so. Twelve percent of RHUMART owners consulted general practitioners twelve or more times, while only 5% of the general population did so.

In the year before starting to use their RHUMART conditioner, owners consulted general practitioners an average of 3.3 times. The average Quebecer, on the other hand, consulted a G.P. only 2.3 times during this same period.

The chi-squared test applied to the number of respondents and their medical consultations yields a result of 96.72, which is much higher than the result enabling us to eliminate the null hypothesis according to which there would be no statistical difference between the two study populations.

We can thus conclude with a probability of error less than 0.001 that before starting to use their conditioner the RHUMART population consulted primary-care physicians significantly more frequently than did members of the general population.

TABLE 2
 Visits to Specialist Physicians
 Before Using the RHUMART Auto-Santé System

No. of Visits	RHUMART Owners				Overall Population			
	People		Visits		People		Visits	
	N	(%)	N	(%)	N	(%)	N	(%)
NONE	425	(43)	0	(0)	602	(64)	0	(0)
ONE	143	(14)	143	(7)	171	(18)	171	(18)
TWO	123	(12)	246	(12)	86	(9)	172	(18)
THREE	50	(5)	150	(8)	35	(3)	105	(11)
FOUR	74	(7)	296	(15)	18	(2)	72	(8)
FIVE	9	(1)	45	(2)	9	(1)	45	(5)
SIX	29	(3)	174	(9)	10	(1)	60	(6)
SEVEN – ELEVEN	15	(1)	141	(7)	8	(0)	79	(9)
TWELVE OR MORE	65	(7)	811	(40)	19	(2)	228	(25)
Don't know/no answer	68	(7)	0	(0)	3	(0)	0	(0)
TOTAL	1001	(100)	2006	(100)	961	(99)	932	(100)
AVERAGE	$\mu = 2.0$				$\mu = 1.0$			
Chi-square	$X^2 = 113.35$				Significant: $a = 0.001$			

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2. Visits to Specialists Before Using the RHUMART Auto-Santé System

During the year prior to purchasing a RHUMART auto-santé system, the 1001 RHUMART owners consulted specialist physicians 2,006 times, while the 961 members of the general population consulted a specialist only 932 times. Before starting to use their conditioning system, the RHUMART owners thus consulted specialist physicians 107% more often than did members of the general population.

The proportion of people who did not consult a single specialist during the twelve-month period is much higher among the general population than among RHUMART owners: 64% of the general population and 43% of RHUMART owners.

A slightly larger proportion of the general population (18%) than of RHUMART owners (14%) consulted a specialist once during the twelve-month period.

While the RHUMART owners began to surpass the general population at the four-visit level where visits to general practitioners were concerned, they did so at the two-visit level where visits to specialists were concerned: 12% of RHUMART owners and 9% of the general population consulted specialists twice during the twelve-month period.

RHUMART owners were more likely to consult specialists two or more times than were members of the general population. Twenty-four percent of RHUMART owners consulted specialists three times, as opposed to only 9% of the general population. Seven percent of RHUMART owners consulted specialists twelve or more times during the twelve-month period, as opposed to only 2% of the general population.

In the year before starting to use the RHUMART conditioner, owners consulted specialists an average of twice. The typical Quebecer, on the other hand, consulted a specialist only once during the twelve-month period.

The chi-squared test applied to the number of respondents and their visits to specialists yields a result of 113.35, which is even higher than the chi-square obtained for the data concerning general practitioners.

We can thus conclude, with a probability of error less than 0.001, that before starting to use their conditioner the RHUMART population consulted specialists significantly more often than did members of the general population.

TABLE 3
 Visits to General Practitioners
 After Six or More Months of Using the RHUMART Auto-Santé System

No. of Visits	RHUMART Owners		Overall Population	
	People N	Visits N (%)	People N	Visits N (%)
NONE	379	(38) 0 (0)	222	(24) 0 (0)
ONE	225	(23) 225 (11)	305	(32) 305 (14)
TWO	127	(13) 254 (13)	183	(18) 366 (17)
THREE	70	(7) 210 (10)	79	(9) 237 (11)
FOUR	50	(5) 200 (10)	47	(5) 188 (9)
FIVE	15	(1) 75 (4)	15	(1) 75 (3)
SIX	32	(3) 192 (9)	35	(3) 210 (9)
SEVEN – ELEVEN	11	(1) 94 (5)	22	(2) 206 (9)
TWELVE OR MORE	62	(6) 755 (38)	51	(5) 612 (28)
Don't know/no answer	30	(3) 0 (0)	2	(0) 0 (0)
TOTAL	1001	(100) 2005 (100)	961	(99) 2199 (100)
AVERAGE	$\mu = 2.0$		$\mu = 2.3$	
Chi-square	$X^2 = 68.59$		Significant: a = 0.001	

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3. Visits to General Practitioners After Six or More Months of Using the RHUMART Auto-Santé System

After six or more months of using the RHUMART auto-santé system, the 1001 RHUMART owners consulted general practitioners a total of 2,005 times, while the 961 members of the general population visited their doctor 2,199 times during a similar twelve-month period. After starting to use their system, the RHUMART owners thus consulted general practitioners 13% less often than did the general population.

Before using the RHUMART conditioner, the number of people who did not visit their primary-care physician at all during the twelve-month period was almost identical in the two groups. After six or more months of use, however, this number was significantly larger among RHUMART owners (38%) than among the general population (24%).

A larger proportion of the general population (32%) than of RHUMART owners (23%) consulted a G.P. once during the year. A slightly larger proportion of the general population (18%) than of RHUMART owners (13%) consulted a doctor twice. This proportion also tended to be greater when it came to three visits: 9% of the general population as opposed to 7% of RHUMART owners.

The same proportion of the general population and of RHUMART owners (16%) visited their physician four or more times during the year.

During the twelve-month period covered by the studies, RHUMART owners consulted general practitioners an average of 2 times, while the typical Quebecer consulted a primary-care physician 2.3 times.

The chi-squared test applied to the number of respondents and their medical consultations yields a result of 68.59, which is again much higher than the result enabling us to eliminate the null hypothesis according to which there would be no statistical difference between the two study populations (26.3).

We can thus conclude, with a probability of error less than 0.001, that after using the RHUMART auto-santé system for six months or longer, the RHUMART population consulted primary-care physicians significantly less often than did the population as a whole.

TABLE 4
**Visits to Specialist Physicians
 After Six or More Months of Using the RHUMART Auto-Santé System**

No. of Visits	RHUMART Owners		Overall Population	
	People N (%)	Visits N (%)	People N (%)	Visits N (%)
NONE	696 (70)	0 (0)	602 (64)	0 (0)
ONE	111 (11)	111 (13)	171 (18)	171 (18)
TWO	59 (6)	118 (14)	86 (9)	172 (18)
THREE	24 (2)	72 (9)	35 (3)	105 (11)
FOUR	43 (4)	172 (21)	18 (2)	72 (8)
FIVE	2 (0)	10 (1)	9 (1)	45 (5)
SIX	5 (1)	30 (4)	10 (1)	60 (6)
SEVEN – ELEVEN	4 (0)	32 (4)	8 (0)	79 (9)
TWELVE OR MORE	23 (2)	284 (34)	19 (2)	228 (25)
Don't know/no answer	34 (3)	0 (0)	3 (0)	0 (0)
TOTAL	1001 (100)	829 (100)	961 (100)	932 (100)
AVERAGE	$\mu = 0.8$		$\mu = 1.0$	
Chi-square	$X^2 = 44.61$		Significant: $\alpha = 0.001$	

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4. Visits to Specialists After Six or More Months of Using the RHUMART Auto-Santé System

After six or more months of using the RHUMART auto-santé system, the 1001 RHUMART owners consulted specialist physicians a total of 829 times during a twelve-month period, while the 961 members of the general population consulted a specialist 932 times. After starting to use their system, the RHUMART owners thus consulted a specialist 15% less often than did the population as a whole.

The proportion of people who did not consult a single specialist during the twelve-month period is somewhat higher among RHUMART owners (70%) than among the general population (64%).

A larger proportion of the general population (18%) than of the RHUMART owners (11%) consulted a specialist once during the year. This proportion also tended to be greater when it came to two visits (9% vs. 6%) and three visits (3% vs. 2%).

RHUMART owners tended to be more likely to consult a specialist four times during the year (4% vs. 2%), but at the rate of five or more consultations per year there was no difference between RHUMART owners and the general population.

During the twelve-month period, RHUMART owners consulted specialists an average of 0.8 times, while the typical Quebecer consulted a specialist once.

The chi-squared test applied to the number of respondents and their medical consultations yields a result of 44.61, which again is higher than the result enabling us to eliminate the null hypothesis.

We can thus conclude, with a probability of error less than 0.001, that after using the RHUMART auto-santé system for six months or more, the RHUMART population consulted specialist physicians significantly less often than did the population as a whole.

TABLE 5
**Consumption of Prescription and Nonprescription Drugs
 Before Using the RHUMART Auto-Santé System and After Six or More Months of Us**

	<u>DRUG CONSUMPTION</u>	
	<u>PRESCRIPTION</u> N (%)	<u>NONPRESCRIPTION</u> N (%)
BEFORE	(n = 1001)	(n = 1001)
Yes	606 (61)	199 (20)
No	391 (39)	797 (80)
Don't Know / No Answer	4 (0)	5 (0)
AFTER	(n = 606)	(n = 199)
More	8 (1)	2 (1)
Just as much	221 (36)	55 (27)
50% less	80 (13)	33 (17)
75% less	94 (16)	35 (18)
Not at all	198 (33)	69 (35)
Don't know / No answer	5 (1)	5 (2)

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5. Consumption of Prescription and Nonprescription Drugs Before Using the RHUMART Auto-Santé System and After Six or More Months of Use

After using the RHUMART auto-santé system for six months or longer, 62% of the owners who had taken prescription drugs and 70% of those who had taken nonprescription drugs had reduced their consumption.

Approximately one-third of those who had used prescription drugs (33%) or nonprescription drugs (35%) had completely stopped using them.

In all, after six or more months of using the RHUMART conditioner, 59% of owners consumed no prescription drugs and 86% consumed no nonprescription drugs.

Since this subject was not covered by the CROP, La Presse survey, we cannot compare the RHUMART owners with the Quebec population as a whole.

However, since the data from this survey is based on a fairly large sample, we can attribute an average rate of consumption to each of the respondents and estimate the rate at which they reduced their consumption of drugs.

To carry out the necessary calculations, we postulated an average rate of drug consumption equal to 1. We multiplied this rate by 0.5 for those people who reported having reduced their drug consumption by 50%, by 0.25 for those who reported a 75% reduction, and by 2 for those who said they had doubled their consumption, etc.

In this way, we were able to estimate that after six or more months of using the RHUMART auto-santé system, the consumption of prescription drugs had dropped by 50% among those who used them and by 30% among the group as a whole.

Similarly, we estimate that after six or more months of using the RHUMART auto-santé system, the consumption of nonprescription drugs had dropped by 56% among those who used them and by 11% among the population as a whole.

Conclusion

Medical Consultations

Before using the RHUMART conditioner, owners consulted primary-care physicians 44% more often than did members of the general population. After using the conditioner for six months or longer, they consulted primary-care practitioners 13% less often than did the general population.

Consultations with specialist physicians declined even more sharply. Before using the RHUMART conditioner, owners consulted specialists 107% more often than did members of the general population. After using the conditioner, they consulted specialists 15% less often than did the population as a whole.

Drug Consumption

After six or more months of using the conditioner, one third of those owners who had been taking prescription or nonprescription drugs completely stopped taking them and two-thirds of them reduced their consumption.

Among the RHUMART population as a whole, consumption of nonprescription drugs declined by 11% and consumption of prescription drugs declined by 30%.



René Tounissoux,
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at CROP † during 20 years

† ***Le Centre de Recherches sur l'Opinion Publique,***
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