PRACA ORYGINALNA

Place of purchase of OTC cold medications

Miejsce zakupu leków OTC na przeziębienie

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STRESZCZENIE

WSTĘP

W niniejszym badaniu podjęto próbę określenia miejsc, w których respondenci kupują leki na przeziębienie bez recepty, z uwzględnieniem wpływu płci, wieku i wykształcenia na miejsce zakupu tych leków.

MATERIAŁY I METODY

Badanie ankietowe przeprowadzono w województwie śląskim. Wzięło w nim udział 134 respondentów, 78 kobiet i 56 mężczyzn w wieku od 19 do 65 lat.

WYNIKI I WNIOSKI

Ankietowani niezależnie od płci, wieku i wykształcenia deklarowali, że najczęściej zaopatrują się w leki OTC na przeziębienie w tradycyjnej aptece. Kobiety częściej niż mężczyźni kupowały leki OTC na przeziębienie w sklepie zielarskim i drogerii oraz wykazywały tendencję do częstszego kupowania ich w super/hipermarkecie. Starsi częściej kupowały leki OTC na przeziębienie w sklepie zielarskim, natomiast młodsi wykazywały tendencję do częstszego zaopatrywania się w nie w super/hipermarkecie. W porównaniu z osobami bardziej wykształconymi, absolwenci szkół zawodowych i podstawowych byli mniej zainteresowani pozaaptecznym dostępem do leków. Spośród osób, które twierdziły, że zawsze kupują leki w aptece, około 29% wskazywało dodatkowo inne miejsca zakupu leków OTC na przeziębienie. W polskiej tradycji miejscem zakupu leków jest apteka, jednak powszechny pozaapteczny dostęp do leków nie sprzyja zachowaniu tej tradycji.

SŁOWA KLUCZOWE

OTC, przeziębienie, miejsce zakupu leków na przeziębienie

ABSTRACT

This study sought to establish the places where OTC remedies for a cold are bought, taking into consideration the sex, age, and education of those who purchase them.

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MATERIALS AND METHODS

A survey was carried out in the Silesia Region (Poland). The respondents were 134 persons, including 78 women and 56 men aged 19–65 years (mean age 38,6 ± 12,5 years).

RESULTS AND CONCLUSIONS

Regardless of the sex, age or education, the respondents declared buying OTC medications for the common cold from a traditional pharmacy. Women more often than men purchased OTC remedies for a cold at a herbalist's and a drugstore. They also tended to obtain such products at a super/hypermarket more frequently. The older subjects were more loyal customers of a herbalist's, while the younger proved to be more inclined to purchase OTC medications for a cold at a super/hypermarket. With respect to persons with higher education, individuals with vocational and primary education levels showed little interest in the non-pharmacy market. From among the subjects declaring they always purchased at a traditional pharmacy, 29% also indicated other establishments providing them with OTC medications for a cold. Poles have traditionally bought medicines from a pharmacy, however, easy access to the non-pharmacy market does not seem conducive for keeping this tradition alive.

KEY WORDS

OTC, common cold, place of anti-cold medication purchase

INTRODUCTION

Traditionally, the main place to buy OTC (over the counter) medications was a pharmacy, where an educated pharmacist offered both over-the-counter and prescription-only products. Drug sales at places other than pharmacies used to be marginal and generally limited to cross-scored painkillers sold at kiosks. When the new free-market rules, following the changes in the political system, were there to stay, the range of OTC medications as well as the number of places where they were obtainable rose. In 2006, it was possible to buy remedies for various ailments without a prescription from non-pharmacy outlets. In total, 110 products and 34 kinds of simple herbs in the form of tablets were already available at shops without a pharmacy. When herbal-medical shops also entered the market, the number of drugs offered in such places reached 1425 [2]. The current regulations make it possible for a product containing 52 single active substances or active substances in combination with one another to be purchased on the non-pharmacy market. The dose, the pharmaceutical form, and the size of the package may vary, however, they depend crucially on the active substances [3]. The 1990's saw not only an expansion in the range of OTC products, but also witnessed a rise in their sales. According to data gathered by the Polish Association of the Self-Medication Industry (PASMI), between the years 1994 and 2004, OTC sales increased fourfold, and in 2007 they accounted for 27% of all medications bought in Poland [4]. In the year 2006, the drug sales income (as reported by PMR and PharmaExpert) amounted to 4.2 billion PLN, reaching 8.5 billion PLN in the year 2009 [5,6]. A part of this amount was generated outside the pharmacy. According to the report by US Pharmacia, the share of non-pharmacy sales in the total sales of OTC products was 5%. What is more, the data from PMR reports that in 2007 this figure rose by 10% compared to the year 2006, and in the year 2009 it stood at 13% [7,8]. Herbal-medical shops, hypermarkets, supermarkets, small grocery stores, kiosks, as well as petrol stations mainly from the Polish non-pharmacy market. A significant role in this share of the market is played by dietary supplements, remedies for a cold and flu, whose sales grow especially between September and March, together with an increase in the incidence of those illnesses [4,7,9]. PMR and PharmaExpert in their latest report "Pharmaceutical and Healthcare market in Poland 2009" [10], informed that at the end of 2008 there was a growth in the value of the Polish pharmaceutical market to 24 billion PLN, with OTC goods accounting for 34% of it. The first three months of the year 2009 demonstrated no crisis in this sector (10.7% increase), and the forecast for the whole year of 2009 was encouraging, predicting a 6% increase in the value of the pharmaceutical market [10,11]. The optimistic predictions were confirmed, and the value of the pharmaceutical market is growing. According to the latest development forecast from the report of PMR and PharmaExpert, the value of the Polish pharmaceutical market may exceed 31billion PLN in the year 2011, posing a 4% growth comparing to the year 2010 [12]. Its high value in Poland and the growing share of the OTC sector encourage one to get a better insight into where OTC products are purchased. Proper distribution, adequate to the demand and embracing the self-medication phenomenon might, in future, appear beneficial to the development of a new pharmaceutical sales strategy.

This study sought to establish the places where OTC remedies for the common cold are bought, taking into consideration sex, age, and education of those who purchase them.

MATERIALS AND METHODS

A survey was carried out in the Silesia Region (Poland) in the period from December, 2007 to May, 2008. The respondents were 134 persons, including 78 women and 56 men aged 19–65 years (mean age 38,6 ± ± 12,5 years). Seventy-four individuals constituted the group of subjects between 18 and 40 years of age, while the remainder of 60 persons represented the age range 41–65. Thirty one of those polled declared they had a higher education degree, 74 – secondary education, while 27 – vocational and primary. Two subjects did not provide an answer to the question on education. The respondents were asked about the frequency with which they bought OTC products for a cold from a traditional pharmacy, an online pharmacy, a drugstore, a kiosk, a corner shop (a small shop which is near one's house or block of flats and sells common foods as well as other objects that are useful in the house), a herbalist's, super/hypermarkets, or petrol stations. A chi-square test was used for statistical analysis, with α = 0.05 regarded as statistically significant.

RESULTS

The vast majority of respondents (about 99%) reported buying OTC medications for a cold from a traditional pharmacy. With respect to popularity, a traditional pharmacy was followed by a herbalist's (31%), super/hypermarkets (25%), a kiosk (25%), a corner shop (22%), a drugstore and a petrol station (14%), and finally pharmacies operating over the Internet (5%) (Fig. 1).

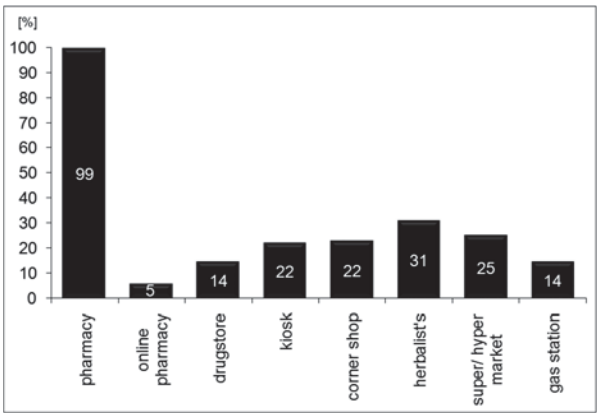

Fig. 1. Percentage of respondents who declared obtaining OTC medications for a cold from traditional pharmacy and other establishments (n = 134).
Ryc. 1. Odsetek osób deklarujących zakup leków OTC na przeziębienie w tradycyjnej aptece i innych placówkach handlowych (n = 134).

Taking into consideration the correlation between sex and places of OTC purchasing, this study established that the percentage of women and men buying at traditional pharmacies was 99% and 100%, respectively. Women more often than men bought OTC medicaments at places other than pharmacies, 6% of women and 4% of men obtained medications for a cold from an online pharmacy, 21% of women and 5% of men bought at a drugstore, 23% of women and 20% of men at a kiosk, 26% of women and 18% of men at a corner shop, 41% of women and 16% of men at a herbalist's, 31% of women and 16% of men chose a super – or hypermarket, while 15% of women and 13% of men purchased at a petrol station.

Statistically significant differences between women and men were noticed with respect to purchasing medications for a cold at a drugstore and a herbalist's ($p < 0.05$) and their tendency to buy remedies at a super/hypermarket ($p = 0.06$) (Fig. 2).

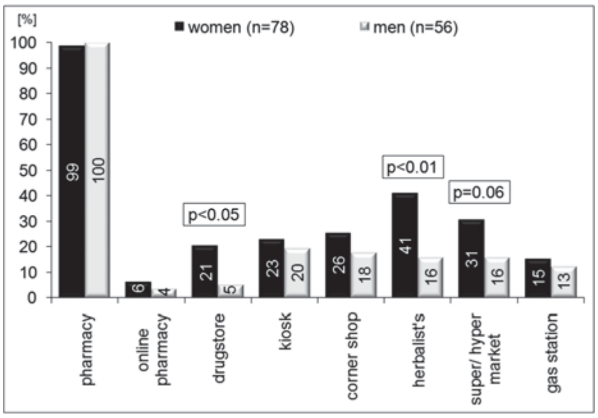

Fig. 2. Percentage of women and men purchasing OTC remedies for a cold from traditional pharmacy, online pharmacy, drugstore, kiosk, corner shop, herbalist's, super/hypermarket, petrol station (n = 134).
Ryc. 2. Odsetek kobiet i mężczyzn deklarujących zakup leków OTC na przeziębienie w tradycyjnej aptece, aptece internetowej, drogerii, kiosku, sklepie osiedlowym, sklepie zielarskim, super/hipermarkecie i stacji benzynowej (n = 134).

In the case of different age groups (18–40, 41–65 years of age) the shopping habits were as follows: a traditional pharmacy was popular with 99% of younger and 100% of older persons, 5% of both age groups bought from a online pharmacy, 15% of younger and 13% of older individuals purchased at a drugstore, 26% and 17% at a kiosk, at a herbalist's – 23% and 40%, 31% and 17% at a super/hypermarket, while 15% and 13% at a petrol station, respectively.

Older persons statistically significantly more often than younger subjects purchased such medicines at a super/hypermarket (Fig. 3).

The influence of education on the preferred setting when it comes to OTC remedies for a cold was analyzed having previously excluded the two persons who had failed to reveal their education level. From among

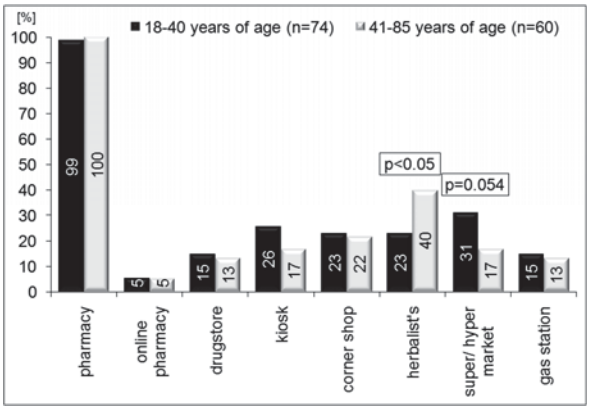

Fig. 3. Percentage of respondents of various age who declared they bought OTC medications for a cold from traditional pharmacy, online pharmacy, drugstore, kiosk, corner shop, herbalist's, super/hypermarket, petrol station (n = 134).
Ryc. 3. Odsetek osób w różnym wieku, deklarujących zakup leków OTC na przeziębienie w tradycyjnej aptece, aptece internetowej, drogerii, kiosku, sklepie osiedlowym, sklepie zielarskim, super/hipermarkecie i stacji benzynowej (n = 134).

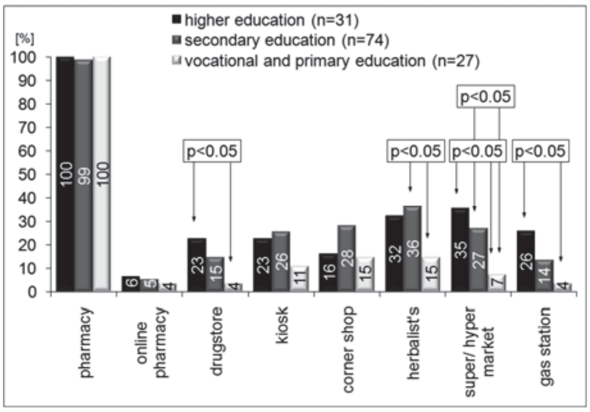

Fig. 4. Percentage of individuals with higher, secondary, vocational and primary education who reported buying OTC remedies for a cold from traditional pharmacy, online pharmacy, drugstore, kiosk, corner shop, herbalist's, super/hypermarket, petrol station (n = 132).
Ryc. 4. Odsetek osób z wykształceniem wyższym, średnim, zawodowym i podstawowym deklarujących zakup leków OTC na przeziębienie w tradycyjnej aptece, aptece internetowej, drogerii, kiosku, sklepie osiedlowym, sklepie zielarskim, super/hipermarkecie i stacji benzynowej (n = 132).

the respondents with higher education, 100% obtained drugs from a traditional pharmacy, 6% from an online one, 23% at a drugstore or a kiosk, 16% at a local shop, 32% at a herbalist's, 35% at a super/hypermarket, 26% at a petrol station. The percentage of those with secondary education was as follows: 99% chose a traditional pharmacy, 5% – an online one, 15% – a drugstore, 26% – a kiosk, 28% – a corner shop, 36% – a herbalist's, 27% – a super/hypermarket, and 14% – a petrol station. When it comes to persons with professional and primary education, the percentage was as follows: 100%, 4%, 4%, 11%, 15%, 15%, 7%, 4%, respectively. Individuals with a university degree statistically significantly more often bought medicines from a drugstore, a super/hypermarket, and at a petrol station ($p < 0.05$). Those with secondary education seemed predisposed to a more frequent purchasing of remedies from a herbalist's and a super/hypermarket compared to the ones with poorer education ($p < 0.05$) (Fig. 4).

Analysis of the frequency with which persons buy medications for a cold from a traditional pharmacy showed that 68% of respondents always chose such an establishment, 29% – often or very often, 2% – rarely and very rarely, and 1% – never (Fig. 5).

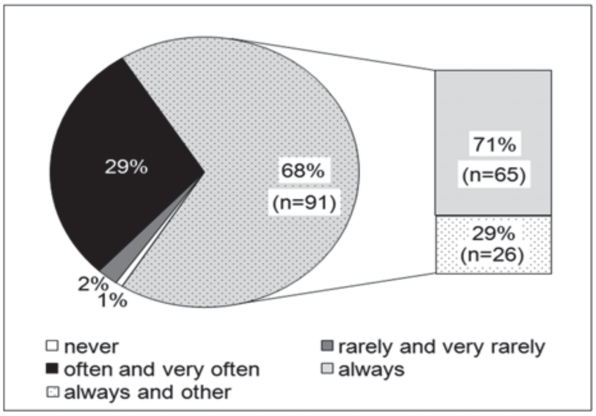

Fig. 5. Frequency with which OTC medications for a cold were obtained at traditional pharmacy, and percentage of respondents who declared they "always" bought OTC drugs at pharmacy but also reported to have been customers of other OTC places (n = 134).
Ryc. 5. Częstość zakupu leków OTC na przeziębienie w tradycyjnej aptece oraz odsetek osób, które „zawsze" kupując leki w aptece, wskazują dodatkowo inne miejsca zakupu (n = 134).

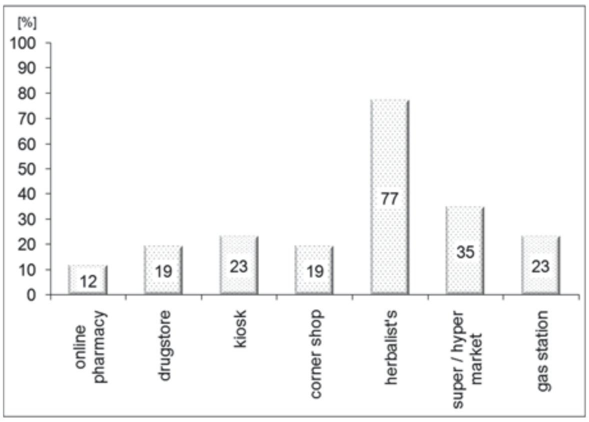

Fig. 6. Percentage of subjects purchasing OTC medications for a cold in other places despite declaring they "always" bought medicaments at traditional pharmacy (n = 26).
Ryc. 6. Odsetek osób kupujących leki na przeziębienie w innych miejscach, pomimo deklaracji, że „zawsze" kupują leki w tradycyjnej aptece (n = 26).

However, out of 91 subjects declaring they always bought medicines at a traditional pharmacy, 29% (26 persons) surprisingly also reported having visited other OTC premises (Fig. 5). The other places included

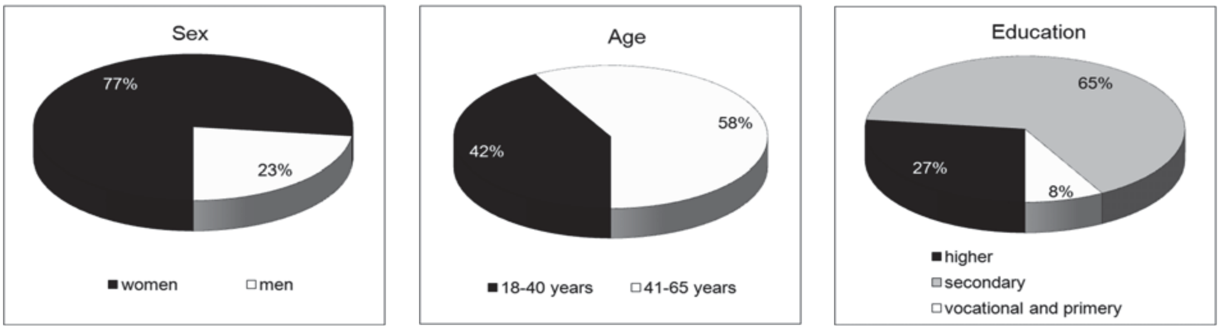

Fig. 7. Characteristics of respondents who declared they "always" bought medicines at traditional pharmacy, and at the same time reported having purchased such remedies from other OTC establishments (n = 26).
Ryc. 7. Charakterystyka grupy osób, które deklarując zakup leków na przeziębienie „zawsze w aptece", wskazały jednocześnie inne miejsca zakupu takich leków (n = 26).

a herbalist's (77%), a super/hypermarket (35%), a kiosk and a petrol station (23%), a drugstore and a corner shop were popular with 19%, while an internet pharmacy with 12% (Fig. 6).

The group of persons who always bought medicines for a cold from a pharmacy but also purchased such remedies at other establishments, 77% consisted of women, and 23% of men, 42% were persons aged 18–40 years, while 58% were individuals within the age range 41–65 years, 27% of the group were respondents with a higher education degree, 65% – – secondary, 8% – vocational or primary (Fig. 7).

DISCUSSION

In our study, 99% of the respondents declared the traditional pharmacy as the place where OTC medications were most often purchased. This result is similar to the data from the report by TNS OBOP (polling organization) "Polish drug purchasing habits" which shows that the majority of Poles (95%) purchase OTC medications from a traditional pharmacy [13,14]. There are a few reasons for the subtle differences between the percentage values demonstrating the share of respondents buying medicines from a pharmacy. The key one is the form of questions asked by the pollsters. In our survey, the respondents were to answer questions about the frequency of purchasing OTC medications for a cold in a particular establishment. However, the research by TNS OBOP consisted in respondents indicating the place (multiple choice questions) where they bought, over the last 6 months, all of their non-prescription medications, regardless of the purpose. Another factor possibly influencing the percentages was the choice of respondent groups which differed in number, age and place of residence [13,14].

Most probably, the abovementioned reasons also caused the differences in the percentages of persons who bought non-prescription drugs at places other than a pharmacy. Next in popularity were a herbalist's (31%), a super- and/or hypermarket (25%), a kiosk and a corner shop (22%), a drugstore and a petrol station (14%), and finally an online pharmacy (5%). Meanwhile, TNS OBOP reports that 10% of subjects buy at such shops as a corner shop, a grocer's, 5% at a super/hypermarket, 5% at a kiosk, 1% from a herbalist's, 1% at a petrol station, and 1% gets medicines via an internet pharmacy. The results of both studies show that internet pharmacies enjoy little popularity in the case of purchasing OTC medications for a cold [13,14]. Perhaps the reason is the need for immediate use of a drug, while obtaining products from an online pharmacy involves some delay.

The results of our research in the non-pharmacy market proved that women more often than men bought OTC remedies for a cold from almost all of the establishments analyzed. Statistically significant differences were shown between the percentage of female and male respondents with respect to shopping at a herbalist's ($p < 0.05$) and a drugstore ($p < 0.01$). A tendency was noticed in the case of purchasing OTC products for a cold at a super/hypermarket ($p = 0.06$).

Entirely different findings were published by TNS OBOP. According to their data it is men (25%) and not women who obtain OTC remedies from places other than a pharmacy more frequently [13]. One might presume that the disparities result from the fact that the research by TNS OBOP encompassed all OTC medications, while in our study the group was limited to non-prescription remedies for a cold only [13,14].

The data published in the TNS OBOP report also demonstrate that the younger generation within the age range 20–29 years (27%) is more willing to buy OTC medications at non-pharmacy establishments than individuals over 60 (12%) [13,14]. In our study, there were no statistically significant differences between the younger (18–40 years of age) and older subjects (41–65 years of age) with respect to the frequency of purchasing OTC medications for a cold at places other than pharmacies, with an exception in the cases of the herbalist's and super/hypermarket. The younger subjects tended to obtain OTC products more often at a super/hypermarket ($p = 0.054$), while the older ones more frequently preferred a herbalist's ($p < 0.05$). Taking into consideration the fact that herbal medicine used to be particularly popular in the past, such a tendency among the older generation to obtain remedies for a cold from a herbalist's seems hardly surprising.

Education turned out to be quite an influential factor when it came to the choice of an establishment for OTC drug shopping. Individuals with vocational and primary education, compared to better educated persons, appeared more careful and less willing to buy such products from a drugstore, a herbalist's, a super- and/or hypermarket, or at a petrol station. In the case of the latter group of subjects, their broader knowledge might have caused them to believe they were able to cope with a cold on their one, and, therefore, they preferred those OTC products at hand. Unfortunately, in available literature there is no relevant data on the correlation between education, which would provide a basis for comparison with our findings.

A peculiar observation could be made on the shopping habits of those subjects who declared they always bought drugs at a traditional pharmacy. It turned out that "always" did not necessarily mean "always" because as much as about 29% of them also indicated another establishment. Such a phenomenon might suggest an attachment to purchasing medications at a traditional pharmacy. Perhaps obtaining remedies at places other than pharmacies, although increasingly popular, has not gained complete support within the society. The reason for these puzzling answers could be, in fact, simpler. Our respondents might not have paid enough attention to the precision of their answers and could have provided them without too much thinking.

CONCLUSIONS

1. Regardless of the sex, age or education, OTC medications for a cold are bought from a traditional pharmacy.
2. Women more often than men purchase OTC remedies for a cold at a herbalist's and a drugstore. They also tend to obtain such products at a super/hypermarket more frequently.
3. The older subjects are more loyal customers of a herbalist's, while the younger prove more inclined to purchase OTC medications for a cold at a super/hypermarket.
4. With respect to persons with higher education, individuals with vocational and primary education levels show little interest in the non-pharmacy market.
5. From among the subjects declaring they always purchase OTC medicaments at a traditional pharmacy, 29% also indicated other establishments providing them with OTC medications for a cold.
6. Poles have traditionally bought medicines from a pharmacy, however, easy access to the non-pharmacy market does not seem conducive for keeping this tradition alive.

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