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## Original Research

# The applicability of the tetraclass model to the management of the patient satisfaction in the pharmacies

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### ABSTRACT\*

The objective of this work is to study the possibilities of the tetraclass model for the evaluation of the changes in the consumer satisfaction from the provided pharmacy services during the time.

Methods: Within the same 4 months period in 2004 and 2006 were questioned at approximately 10 pharmacy consumers per working day. Every consumer evaluated the 34 service elements on a 5 points semantic-differential scale. The technique of the correspondence data analysis was used for the categorisation of the services.

Results: Most of the services have been categorized as basic ones. For the age group up to 40 years the access to pharmacy became a key element and external aspects became a secondary element in 2006 year.

For the group of patients that are using the services of the pharmacy for more than 2 years, availability of phone connection, quality of answers and product prices move from plus to secondary element. The ratio quality/price moves from the group of basic to key services, visibility of the prices and hygiene became basic elements from secondary ones. During the two years period, all the service elements connected with the staff as availability, identification, good looking, confidence, dressing, advices, technical competence, explanation, and time spent with clients remain basic services. The confidentiality of the staff remains always a key element.

Conclusion: Our study shows that the tetraclass model allows taking more informed managerial decisions in the pharmacies, as well as, is providing information for the concrete area of services and possible measures. In case of a development of a simple statistical program for quick processing of the inquiry data, the method will become applicable and affordable even for small pharmacies.

**Keywords:** Consumer Satisfaction. Community Pharmacy Services.

### APLICABILIDAD DEL MODELO TETRACLASS A LA GESTIÓN DE LA SATISFACCIÓN DEL PACIENTE EN LAS FARMACIAS

#### RESUMEN

El objetivo de este trabajo es estudiar las posibilidades del modelo tetraclass para la evaluación de los cambios durante el tiempo en la satisfacción del consumidor sobre los servicios proporcionados en la farmacia.

Métodos: En el mismo periodo de 4 meses en 2004 y 2006 se interrogó a aproximadamente 10 consumidores de farmacia por día laborable. Cada consumidor evaluó los 34 elementos del servicio en una escala diferencial semántica de 5 puntos. Para la categorización de los servicios, se utilizó la técnica de análisis de correspondencia de datos.

Resultados: La mayoría de los servicios se calificaron de básicos. Para el grupo de edad de hasta 40 años, el acceso a la farmacia se convirtió en el elemento clave y el aspecto externo fue un elemento secundario en 2006.

Para el grupo de pacientes que usan los servicios de farmacia desde hace más de 2 años, la disponibilidad de la conexión telefónica, la calidad de la respuesta y los precios de los productos pasaron de elemento principal a secundario. La relación calidad/precio se movió del grupo de servicio básico a servicio clave, la visibilidad de los precios y la higiene pasaron de elementos secundarios a básicos.

Durante el periodo de dos años, todos los elementos relacionados con el personal, como disponibilidad, identificación, buena apariencia, confianza, vestuario, consejos, competencia técnica, explicaciones y tiempo pasado con los clientes permanecieron como servicios básicos. La confidencialidad del personal permaneció como elemento clave.

Conclusión: Nuestro estudio muestra que el modelo tetraclass permite tomar decisiones de gestión mejor documentadas en las farmacias, así como proporcionar información sobre el área específica de los servicios y las posibles medidas. En caso de desarrollar un programa estadístico simple para un proceso rápido de datos de encuestas, el método será aplicable y asequible incluso para las farmacias pequeñas.

**Palabras clave:** Satisfacción del consumidor. Servicios de farmacia comunitaria.

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## INTRODUCTION

The concept of consumer satisfaction is widely used to study the willingness of consumer to purchase a particular good or choose the proposed service.<sup>1-8</sup> Researchers agree that attitudes to satisfaction are an emotional response<sup>9</sup> or the result of a simultaneously emotional and cognitive process.<sup>10,11</sup> Numerous studies in the scientific literature on consumer satisfaction are pointing at the importance of this concept for the manufacturing, as well as the trade companies.<sup>12</sup> The problem became more complex in longitudinal studies, because the satisfaction is a changing consumer attitude and is influenced by the development of the services and competitors performance during time.<sup>13-17</sup> For the managers, it is necessary to possess a reliable tool not only to evaluate the consumer satisfaction, but to follow its persistence and periodically to identify elements or services that are responsible for any change.

Possibilities of the tetraclass model used for the measurement of consumer satisfaction and loyalty were discussed in details in a lot of studies on different services and its appropriateness for a complex offer of services as pharmaceutical and medical ones was recognized.<sup>18-21</sup>

The objective of this work is to study the possibilities of the tetraclass model to evaluate the changes in the consumer satisfaction from the provided pharmacy services during the time.

Main study questions are:

- Could the tetraclass model be used for the evaluation of the changes in consumer's satisfaction during the time and identification of the responsible elements of services?
- Are there any pharmacy services that were reclassified by the consumers more often?
- How can the results of the tetraclass model be used by the pharmacy managers to improve the services and increase the level of satisfaction?

Researchers have defined consumer satisfaction in many different ways. For our study we have used the definition proposed by Garbarino and Johnson<sup>22</sup> who see satisfaction as "either an immediate post-purchase evaluative judgment or an emotional reaction to the firm used for the most recent transaction". The conceptual view of the tetraclass model has been presented elsewhere in details and here is explained in brief.<sup>18,19</sup> The services provided by the companies are classified into one of 4 categories, according to the way in which they affect the clients' experiences as follows:

- "Basic services": these service elements contribute strongly to the clients' overall level of dissatisfaction when they are evaluated in an unfavourable fashion. However, when they are evaluated favourably, they contribute only weakly to client satisfaction;

- "Plus services": these service elements contribute strongly to the overall level of client satisfaction when they are evaluated favourably. When they are evaluated unfavourably they contribute weakly to the client's dissatisfaction;
- "Key services": these service elements contribute strongly to the degree of dissatisfaction or satisfaction of the client, regardless of the type of evaluation by the client, negative or positive;
- "Secondary services": these service elements do not have a primary role in the level of overall client satisfaction or dissatisfaction, whichever way they are evaluated.

By defining the important services for the area of interest and applying a correspondence analysis<sup>23</sup> towards the data processing, a simple visual map is produced pointing at the place of the concrete services elements within the above four groups of basic, secondary, plus and key services.

Researchers employing the tetraclass model summarise its advantages as a technique that is based on clients own experiences of services and not a simulation, allowing to develop visual contribution charts, establishing the boundaries between categories of services elements clearly and not arbitrarily, weighting them on the basis of their positive or negative performance.<sup>24</sup> As areas of application have been studied sectors, such as automobile finance, catering<sup>25</sup> and large scale alimentary distribution.<sup>26</sup> It has been also applied to the health sector<sup>18,27,28</sup> and towards the complex offer of pharmacy services.<sup>19</sup> The later work formulate the practical advantages of the tetraclass model in the mapping, which permits the manager to see quickly if there are important changes in the consumer classification of service elements and to create measures for improving the quality of services if necessary.<sup>19</sup>

In this work we will use the tetraclass model to support the managerial decision in case of changes in the consumer satisfaction by the pharmacy services.

## METHODS

This work is a continuation of the previous publication that explores the possibility of the tetraclass model for the evaluation of consumers' satisfaction in the pharmacies<sup>19</sup>. Now we want to analyse if this technique provides an opportunity to make an informed managerial decision in case of the changes in the consumer satisfaction during time.

### Domain of application

Five completely renewed and modernized central pharmacies belonging to a company possessing a chain of pharmacies in Sofia were chosen and observed twice in a 2 years period. We choose these modernized pharmacies because they fully comply with the requirements for good pharmaceutical practice and marketing standards for performing goods and services and thus we

wanted to avoid any low satisfaction because of the different standards within the pharmacies.<sup>29-32</sup>

One of our interests is to compare the changes in the consumer's satisfaction from the services provided by the well organised pharmacies during the time, and to discuss the possible reasons for changes and managerial behaviour.

### Study sample

Within the same 4 months period in 2004 and 2006 were questioned at approximately 10 patients per

working day. There was not preliminary consumer's selection. All that agree to participate at the moment of the interviewer presence was included in the survey. The interviewers were not working in the pharmacy and were instructed not to influence the consumer's answers but in case of technical difficulty to support reading and fulfilling of the questionnaire. After eliminating the uncompleted questionnaires, 962 of them were retained for our study separated in different groups (Table 1).

Table 1: Characteristics of the total sample.					
	Category	Frequency 2004	Frequency 2006	Z value	significant difference
Age	20-29	31,8	32,9	0,192	no
	30-39	20,1	22,4	0,539	no
	40-49	16,4	8,6	2,821	yes
	50-59	13,3	11,4	0,656	no
	60-69	12,6	12,9	-0,120	no
	70 and more	5,9	11,4	2,994	yes
Gender	Male	64,1	63,3	0,185	no
	Female	35,8	32,9	0,727	no
	Missing value	0,1	0,5	1,227	no
Level of study	Primary school	2,0	2,9	-0,281	no
	Secondary school	13,4	12,4	1,267	no
	Secondary professional school	23,0	17,1	0,770	yes
	Bachelor degree	19,9	20,5	1,226	no
	Masters degree	38,0	44,8	1,494	no
	PhD degree	3,6	1,0	1,365	no
Distance	<1 Km	31,3	38,9	1,831	no
	1-5 Km	33,6	29,8	1,014	no
	6-10 Km	17,7	15,4	0,583	no
	>10 Km	17,3	15,9	0,583	no
	Missing value	0,1	1,0	-0,385	no
Loyalty	<1 year	37,6	31,4	1,523	no
	1 year	14,1	11,0	1,017	no
	2 years	13,7	11,0	0,656	no
	3 years	6,8	8,6	0,885	no
	4 years	4,0	5,7	0,441	no
	> 5 years	23,7	31,9	2,285	yes
	Missing value	0,1	0,5	1,227	no

### Questionnaire

The questionnaire comprises of 34 different service elements (Table 2).

The first part of the questionnaire measures the global satisfaction of the consumer using three questions:

- "It might be sad that I am satisfied of the service";
- "I am happy that I am using the services of this pharmacy";
- "I think that I have been always doing well when I was using the services of this pharmacy".

In the second part every consumer evaluated the 34 service elements on a 5 points semantic-differential scale.

Additional questions are focusing on different consumers characteristics as age (6 segments from 20 to more than 70), gender, level of education (6 segments from Primary school to PhD degree),

distance between the pharmacy and consumer's home (from less than 1 Km to more than 10 Km) and the duration of the contact with the pharmacy (from less than 1 to more than 5 years). The changes were also separately statistically analysed in relation to patients' characteristics using the 2-tail z-test analysis assuming the two proportions are equal (Table 1).

### Data analysis

The technique of the correspondence data analysis was used for the categorisation of the services. The perceived performances of the 34 different services were first asymmetrically dichotomised. Responses from 1 to 3 were considered as negative, whereas responses from 4 to 5 were considered as positive.<sup>23</sup> The satisfaction scores were also regrouped into 2 modalities, termed "positive score" and "negative score". For the last variable, the dividing point was identified using classification and regression tree segmentation.<sup>33</sup>

Table 2. Evaluated service elements	
1	I have a quick access
2	It is easy to park near to the pharmacy
3	The working time of this pharmacy is satisfying me
4	The out side view of the pharmacy is pleasant
5	The phone line is always free when I am calling
6	The person answering the phone call is always polite
7	I am always receiving clear and prompt answer by phone
8	Pharmacists always knows me when I enter
9	The waiting time in the pharmacy is satisfying me
10	The staff is always available
11	I can easy distinguish the staff from the other customers
12	The staff is always kind to me
13	The staff manage to inspire me with a confidence
14	The working clothes of the staff are clean
15	The advices that I am receiving are always personally for me
16	The professional knowledge of the staff are good
17	The staff is devoting me enough time
18	The explanations that I am receiving are understandable
19	In case of necessity I have a possibility for private conversation with the pharmacists
20	In this pharmacy were always trying to solve my problem
21	I consider that pharmacist solve my problem in my interest and not in his
22	I know at what desk to go
23	The pharmacy seems to me clean
24	The pharmacy seems to me well ordered
25	If I need there is a place to sit down
26	The pharmacy posses a place for children for amusing them and take their attention
27	The interior and decoration of the pharmacy are on good level
28	Prescription medicines are always available in this pharmacy
29	Para-pharmaceuticals are well placed
30	Prices of the para-pharmaceuticals are well shown
31	There is a big choice of para-pharmaceuticals products in this pharmacy
32	Prices of the para-pharmaceuticals are cheap
33	In this pharmacy is always clear to me what I should pay
34	In this pharmacy the relation quality/price is good
Fully disagree=1, Likely disagree=2, Neither agree nor disagree=3, Likely agree=4, Fully agree=5	

Correspondence analysis was then run on a 68 x 2 cross-table of 2 variables. One of 68 modalities was made up of the dichotomized evaluations of each of the 34 services. The other, satisfaction, had 2 modalities (positive and negative). The resulting axis is, therefore, a 1- dimensional one and consequently recreates 100% of the initial variation. Each service can therefore be attributed 2 factorial scores, which are the score of correspondence of its 2 levels of evaluation (positive and negative) with global satisfaction. A factorial chart then displays each service with its 2 scores. The horizontal axis shows the score of correspondence for the positive evaluation of the services and is interpreted as its contribution of the service overall satisfaction when it is evaluated positively. Similarly, the vertical axis of the factorial chart represents the contribution of

the service to overall satisfaction when it is evaluated negatively.

## RESULTS

The results are presented for the changes in the classification of every one of 34 service elements of the questionnaire, as well as, are separated according to the characteristics of the respondents (Figure 1-2 and Table 3-7).

On Table 1 are shown the differences among both groups of respondents. Most of the respondents' characteristics did not differ statistically in both periods of interviewing. Out of 27 respondents' characteristics 4 differs statistically significant among both groups and those are groups of respondents among 40-49 years old; 70 years and more; secondary professional school; and pharmacy visitors for 5 years and more. The similarity in most of the respondents' characteristics allows to state clearly that there are shifts in consumer preferences for the services in question.

### Changes in the classification of service elements from all the clients

Using the methodology given above, a first two mappings have been obtained, concerning the position of all the services elements for both observations (Figure 1- 2).

Most of the services have been categorized as basic ones during both inquiries but within the group of plus services remain only two so there is a decrease in the services that contribute strongly to the overall level of client satisfaction in case of positive evaluation and weakly in case of negative evaluation (Figure 1-2). It could be assumed that most of the pharmacy services appear to be basic for the customers.

Eight of the service elements change their categorization. The easiest access to the pharmacies (question 2) changes from secondary to plus category so people started to evaluate favourably those pharmacies that provide such an opportunity to their clients. This could be explained with the increasing traffic pressure in the town and lack of parking places in the central city area. Politeness and quality of the phone answer moves from class plus to basic elements (questions 6, 7) so in case of their negative evaluation the satisfaction will decrease. The waiting time in pharmacy (question 9) moves from basic to key category. It also might be explained with external factors as are the time pressure on the clients and increase in the intensity in everyday life. Availability of availability seats moves from basic to secondary category probably because of the same reason of shortened time schedule of the clients especially in the central areas (question 25). Availability of the place for children moves from plus to secondary category (question 26); visibility of the prices (question 30) became more important for the clients and is categorized as a basic service in the second observation. At the end the affordability of medicines, evaluated in terms of good prices (question 32), became secondary element.

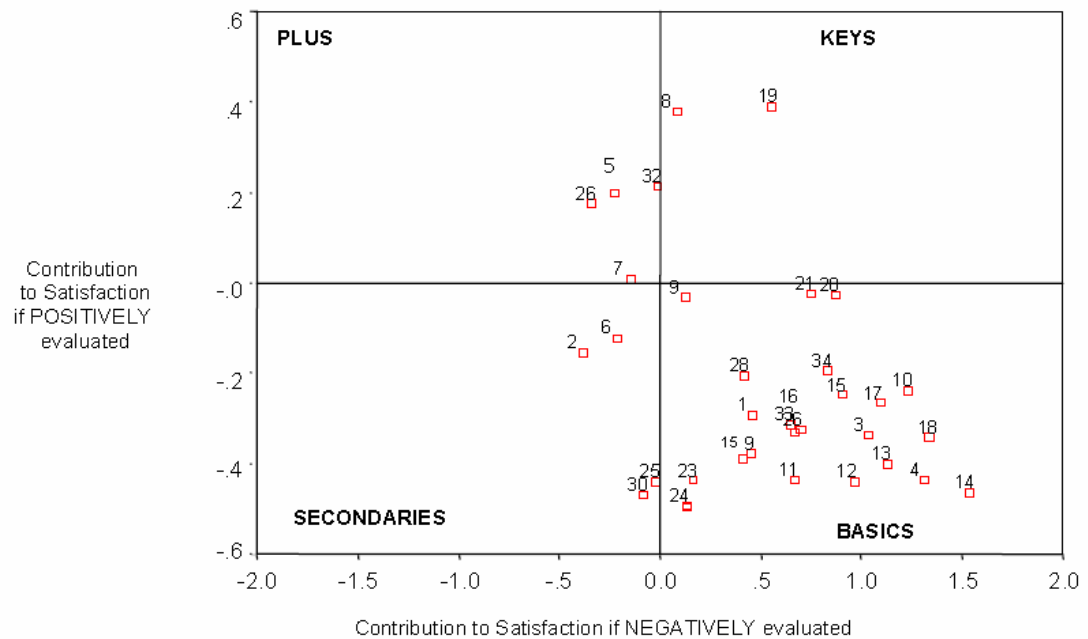


Figure 1: Categorization of service elements in four classes: "Basics", "Plus", "Keys" and "Secondaries" according to their coordinates on the axis of contributions to dissatisfaction when negatively evaluated (X-axis) and their coordinates on the axis of contributions to satisfaction when positively evaluated (Y-axis) after the first questionnaire in 2004.

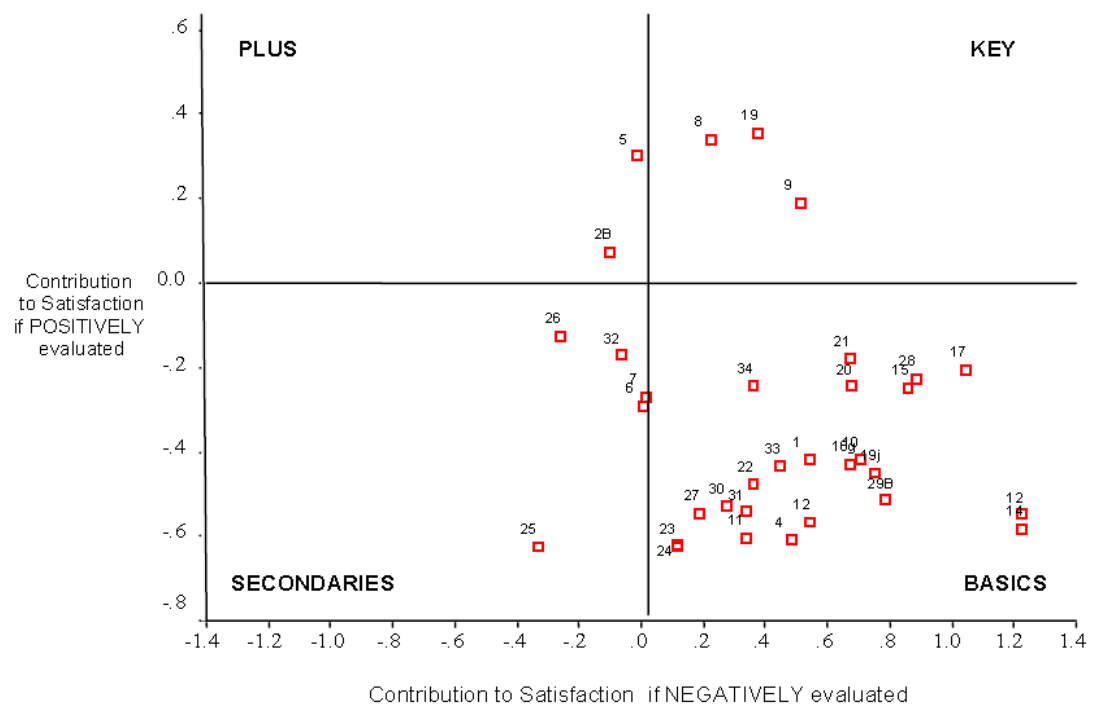


Figure 2: Categorization of service elements in four classes: "Basics", "Plus", "Keys" and "Secondaries" according to their coordinates on the axis of contributions to dissatisfaction when negatively evaluated (X-axis) and their coordinates on the axis of contributions to satisfaction when positively evaluated (Y-axis) after the second questionnaire in 2006.

Table 3: Changes in the categorization of the service elements in different age groups of respondents for both periods of observation.

code	Item	First observation 2004		Second Observation 2006	
		AGE<40	AGE>40	AGE<40	AGE>40
2	Access: places	SEC	SEC	SEC	KEY
4	Access: external aspect	BAS	BAS	BAS	SEC
5	Phone: disposable	PLU	PLU	KEY	SEC
6	Phone: amiability of the respondent	SEC	SEC	KEY	SEC
7	Phone: quality of the answer	SEC	PLU	KEY	SEC
8	Welcome: recognition	PLU	KEY	KEY	KEY
9	Welcome: waiting	BAS	BAS	BAS	KEY
18	Chemist: my interest rather that its	KEY	BAS	BAS	BAS
23	Pharmacy: cleanliness	BAS	SEC	BAS	SEC
24	Pharmacy: merchandising	BAS	SEC	BAS	SEC
25	Pharmacy: available seats	BAS	BAS	SEC	BAS
26	Pharmacy: children area	PLU	PLU	PLU	SEC
27	Pharmacy: decoration	BAS	BAS	BAS	SEC
29	Products: presentation	SEC	BAS	BAS	BAS
30	Products: visibility of the prices	BAS	SEC	BAS	BAS
32	Products: choice	BAS	SEC	BAS	BAS
33	Products: good prices	KEY	PLU	SEC	BAS

KEY=Key, PLU=Plus, SEC=Secondary, BAS=Basic

Table 4: Changes in the categorization of the service elements in different gender groups of respondents for both periods of observation.

code	Item	First observation 2004		Second observation 2006	
		MALE	FEMALE	MALE	FEMALE
2	Access: places	PLU	SEC	SEC	PLU
5	Phone: disposable	PLU	PLU	KEY	SEC
6	Phone: amiability of the respondent	SEC	SEC	BAS	SEC
7	Phone: quality of the answer	PLU	SEC	BAS	SEC
8	Welcome: recognition	KEY	KEY	KEY	SEC
9	Welcome: waiting	BAS	BAS	KEY	KEY
13	Staff: confidence	BAS	BAS	BAS	SEC
19	Pharmacy: availability	KEY	BAS	BAS	BAS
21	Chemist: my interest rather that its	KEY	BAS	BAS	BAS
24	Pharmacy: merchandising	SEC	SEC	BAS	BAS
25	Pharmacy: disposable seats	SEC	BAS	SEC	SEC
28	Products: disposable	SEC	BAS	BAS	BAS
29	Products: presentation	SEC	BAS	BAS	BAS
30	Products: visibility of the prices	SEC	BAS	BAS	BAS
31	Products: choice	SEC	BAS	BAS	BAS
32	Products: good prices	SEC	KEY	SEC	SEC
33	Products: transparency of the invoice	SEC	BAS	BAS	BAS
34	Products: ratio quality/price	SEC	KEY	BAS	KEY

KEY=Key, PLU=Plus, SEC=Secondary, BAS=Basic

It is important for the managers to point out that a good surprise for the clients (the plus elements) become something usual (a basic element) next time for the clients. It means that for a service area like pharmacies it is necessary to develop new services very often.

#### Changes in the classification of service elements by different subgroups of respondents

The changes in client evaluation of the pharmacy services are important not only in general but also considering by segments.

##### • Changes in categorisation by different age groups

A variety of changes have been observed according to the age structure of the respondents (Table 3). For the age group up to 40 years the access to

pharmacy became a key element and external aspects became a secondary element in 2006 year. Now the managers know which one of the clients' segments is more likely to be dissatisfied by the difficulties in the access to the pharmacy and those are the young active people.

The welcoming as recognition and waiting is classified mainly as a key element and it could mean that the central pharmacies started to possess regular or important clients that expect to receive more attention. Categorization of the phone answers in terms of availability; politeness; and quality performs a variety in changes and thus confirms importance of this service to the respondents and needs for monitoring and improvement if necessary.

Table 5. Changes in the categorization of the service elements according to level of education of clients for both periods of observation.

code	item	First observation 2004		Second observation 2006	
		STUDY LOW	STUDY HIGH	STU LOW	STU HIGH
2	Access: places	SEC	SEC	SEC	PLU
4	Access: external aspect	BAS	BAS	SEC	BAS
6	Phone: amiability of the respondent	SEC	SEC	SEC	BAS
7	Phone: quality of the answer	PLU	SEC	SEC	BAS
9	Welcome: waiting	BAS	KEY	KEY	KEY
19	Pharmacy: availability	BAS	KEY	BAS	BAS
21	Chemist: my interest rather that its	BAS	KEY	BAS	BAS
23	Pharmacy: cleanliness	BAS	SEC	SEC	BAS
24	Pharmacy: merchandising	BAS	SEC	SEC	BAS
25	Pharmacy: disposable seats	BAS	BAS	SEC	SEC
26	Pharmacy: children area	PLU	PLU	SEC	SEC
27	Pharmacy: decoration	BAS	BAS	BAS	SEC
29	Products: presentation	BAS	SEC	BAS	BAS
30	Products: visibility of the prices	BAS	SEC	BAS	BAS
31	Products: choice	BAS	SEC	BAS	BAS
32	Products: good prices	KEY	PLU	SEC	SEC

KEY=Key, PLU=Plus, SEC=Secondary, BAS=Basic

Table 6: Categorization of the service elements according to the distance to the pharmacy as segmentation variable for both periods of observation.

Code	Item	First observation 2004		Second observation 2006	
		DIST. < 5 Km	DIST. > 5 Km	DIST. < 5 Km	DIST. > 5 Km
4	Access: external aspect	BAS	BAS	BAS	SEC
5	Phone: disposable	PLU	SEC	PLU	BAS
6	Phone: amiability of the respondent	SEC	SEC	SEC	BAS
7	Phone: quality of the answer	PLU	SEC	SEC	BAS
8	Welcome: recognition	PLU	KEY	KEY	KEY
9	Welcome: waiting	BAS	BAS	KEY	KEY
11	Staff: identification	BAS	BAS	SEC	BAS
19	Pharmacy: availability	BAS	KEY	BAS	BAS
21	Chemist: my interest rather that its	BAS	KEY	BAS	BAS
25	Pharmacy: cleanliness	SEC	BAS	BAS	SEC
24	Pharmacy: merchandising	SEC	BAS	SEC	SEC
25	Pharmacy: available seats	SEC	BAS	SEC	SEC
27	Pharmacy: decoration	SEC	BAS	BAS	SEC
28	Products: available	SEC	SEC	BAS	BAS
29	Products: presentation	SEC	SEC	BAS	BAS
30	Products: visibility of the prices	SEC	BAS	BAS	BAS
31	Products: choice	SEC	BAS	BAS	BAS
32	Products: good prices	SEC	PLU	SEC	BAS
33	Products: transparency of the invoice	SEC	BAS	BAS	BAS
34	Products: ratio quality/price	SEC	BAS	BAS	SEC

KEY=Key, PLU=Plus, SEC=Secondary, BAS=Basic

The pharmacy itself as hygiene, decoration, merchandising, available sits and children area were reclassified mainly in the group of secondary elements that is probably due to the improving conditions elsewhere. Merchandising characteristics of the products as presentation, visibility of the prices, choice and good prices became all basic services except the last one for the group below 40 was evaluated as secondary element. It could be supposed that those elements became part of the common expectancies and their quality maintenance should be an important goal for the manager.

#### • Changes in categorisation by different gender groups

An approximately same number of service elements from the same service groups change their categorization from the different gender groups of respondents (Table 4).

Access to the pharmacy and all phone characteristics became plus and secondary services for the female group of clients. Welcoming recognition and waiting became mainly a key element for both gender groups. Characteristics of the pharmacy and products mostly became a basic service that is commonly expected to be available



and of a good quality by both this segments of respondents. It is necessary to point out that the ratio quality/price became from secondary a basic element for male and remain a key element for female group while the good price is a secondary

element for both genders. It could be commented that the people became more sensitive to the quality of the products and value that they received in exchange of the money spent in pharmacies.

Table 7: Categorization of the service elements using the length of time for which the consumers had been a client with the pharmacy as segmentation variable.

code	Item	First observation 2004		Second observation 2006	
		LENGTH < 2 years	LENGTH ≥ 2 years	LENGTH < 2 years	LENGTH ≥ 2 years
2	Access : places	SEC	SEC	PLU	SEC
4	Access : external aspect	BAS	BAS	SEC	BAS
5	Phone : available	PLU	PLU	KEY	SEC
6	Phone : amiability of the respondent	SEC	SEC	BAS	SEC
7	Phone : quality of the answer	SEC	PLU	BAS	SEC
8	Welcome : recognition	PLU	KEY	KEY	KEY
9	Pharmacy : availability	KEY	BAS	BAS	BAS
23	Pharmacy : cleanliness	BAS	SEC	SEC	BAS
25	Pharmacy : available seats	BAS	BAS	SEC	SEC
27	Pharmacy : decoration	BAS	BAS	SEC	BAS
29	Products : presentation	SEC	BAS	BAS	BAS
30	Products : visibility of the prices	BAS	SEC	BAS	BAS
31	Products : choice	SEC	BAS	SEC	BAS
32	Products : good prices	KEY	PLU	BAS	SEC
34	Products : ratio quality/price	BAS	BAS	SEC	KEY

KEY=Key, PLU=Plus, SEC=Secondary, BAS=Basic

#### • Changes in categorisation by differently educated groups

The respondents which education includes primary school, secondary school and secondary professional school are classified in the "low" level educational group and those with bachelor university degree, master university degree and PhD degree are classified as "high" level educational group for the purposes of the statistical analysis (Table 5). Within these two subgroups of respondents again the same service elements perform change in their categorization – the access and internal aspects of the pharmacy, phone services, pharmacy characteristics and products characteristics. The group of clients with a high level of education classified all mentioned services elements mainly as basic or secondary services, except the welcoming that was classified as a key element and parking places as a key element. In the "low" level education group prevail the secondary category for the same services but welcoming remain key element for both groups.

#### • Changes in categorisation by groups living at different distances

The respondents that leave at different distances from the pharmacy change the classification of all services referring to the pharmacy, as well as, to the products. By reclassifying them as basic or secondary, they either expect corresponding services as a routine practice or their presence did not affect their degree of satisfaction (Table 6). In this subgroup of respondents the welcoming by the staff became the key service for both categories of customers.

#### • Changes in categorisation by groups using the pharmacies regularly

For the managers the most important are the regular customers that use the pharmacy services for a long period of time. Their categorization of the service elements and changes in their perception are presented on Table 7. Within the group of the respondents that have been using the services of the pharmacy for more than 2 years an availability of phone connection, quality of answers and product prices move from plus to secondary element. The ratio quality/price moves from the group of basic to key services, visibility of the prices and hygiene became basic elements from secondary ones. For the respondents that are using the pharmacy services for less than two years availability of phone line and welcoming became key elements that strongly contribute to their satisfaction but characteristics of the pharmacy and the products became either basic or secondary and did not affect their degree of satisfaction in a great extent.

#### • Elements of services that did not change their categorisation

During the two years period, all the service elements connected with the staff as availability, identification, good looking, confidence, dressing, advices, technical competence, explanation and time spent with clients remain basic services for the respondents in general, as well as for their subgroups. The confidentiality of the staff remains always a key element.

Instead of the fact that these elements did not change their categorization this does not mean that they are not important, even an opposite, it is

evident that the staff performance always contribute strongly to the dissatisfaction in case of negative evaluation that's why the staff performance should be a high level managerial priority.

It means also that associated services (on the contrary of core service) weight a lot in the client perception of the pharmacy.

## DISCUSSION

As it was pointed in the previous works one of the advantages of the tetraclass model is the visual mapping of the services classification.<sup>19</sup> We now show in this work that the visual mapping allows quick evaluation of the changes in the service elements reclassification by the consumers in general and by different segments. In case of massive or repeating changes in the services classification by the consumers, an informed managerial decision could be made to improve necessary services in a given client segment, after careful consideration of the relevant client segments and multiples.

From the managerial point of view it is important not only to try to explain the changes and their probable reasons but to take corresponding actions. For example to try to make the access to pharmacy more easy, to improve the quality of phone answers by educating the staff, to open new working place for busy hours and shorten the waiting time in pharmacy etc.

We also saw that the consumer perception in different segments is varying in respect with their age, gender and loyalty. The needs of the different consumer groups' ones again are very important for the managers to take in accounts relevant measures oriented to the changing expectations, especially of the key clients. Even more, the concrete reclassification gives to the pharmacy managers' reliable information for the possible reasons and necessary managerial measures as was presented in the results section.

The fact that there are pharmacy services which have been reclassified by the consumers more often is a key result in our study because it is very important for the manager to know to which one of the services the customers are more sensitive. These services should be an object of regular monitoring and improvement. It is also important to know the basic services that contribute strongly to the clients' overall level of dissatisfaction when they are evaluated in an unfavourable fashion because these are the services that consumers perceive as characteristics of the pharmacy itself and they always expect to receive them in the best possible manner.

It is also a key result that the classification of the staff as basic service was not changed by any customer segment and in general. The staffs are central core service and its performance in a best

possible way to the consumers is one of the most important managerial tasks.

Some concrete measures have been proposed to the pharmacy managers in order to improve the services and increase the level of satisfaction but depending on the pharmacy goals additional measures might be also provided.

One of the limitations in our study is the fact that we choose only the pharmacies belonging to the same chain of pharmacies but it is from the other side an advantage of the study because this allows to keep some variables under control. If the selected pharmacies differ in respect of the external view or range of provided goods the comparison will become difficult. In fact, probably every independent pharmacy should organize separated observations. From such a point of view the data processing might become a limitation to the managers.

The other limitation refers to the fact that the interview is focusing on the consumers of the concrete pharmacies. It could be supposed that when peoples are visiting a pharmacy at a regular basis they are reasonably satisfied from the provided services. But this is in fact one of the main goal of any management – to try to personalize regular customer and to make them loyal to the store.

## CONCLUSIONS

The tetraclass model allows taking more informed managerial decisions in the pharmacies, as well as, is providing information for the concrete area of services and possible measures.

In case of a development of a simple statistical program for quick processing of the inquiry data, the method will become applicable and affordable also to the independent pharmacies.

Establishing a regular inquiry practice at least ones in 2 years gives sufficient information about the customers' preferences and expectancies.

Three recommendations to the pharmacy managers can be pointed:

- keeping a good quality of the staff because it is a core service and we have seen that their perception is quite stable between all the customers segments;
- doing the study of customer satisfaction with this tetraclass model allow the managers to find the levers of satisfaction;
- realizing this study each two years to appreciate the changes in customer expectations and adapting the services elements.

## CONFLICT OF INTEREST

None declared.

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