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Social isolation impact on the patients' treatment in Poland medical institutions

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Purpose – to demonstrate the links between social exclusion and the higher costs of treating customers depending on this social sector, unlike other customers who are neither unemployed nor live in poverty.

Design/Method/Approach of the research. In the external study, a survey method was used, supplemented with a method of observation at the study site. The authors of the publication carried out research using the qualitative method, formalized interview with medical staff. This research was done in University Hospital in Wroclaw in 2018.

Findings. Any health organization must create good relations inside the organization and mostly from outside. One of them is a patient that the author calls a "customer" as every person spends money on health organization leading to the proper hospital functioning. Decision-makers within the system continuously must make choices and seek alternative ways to measure illness costs. One of the factors that harm the optimization of the health services' scale is the social exclusion phenomenon, which is significantly affecting society. Socially isolated people's problems are deprivation, as a lack of access to the necessary level of high-quality, safe, and effective medical services, and cultural competence to provide such medical services. The ex-post analysis conclusions show that relationships between the analyzed areas and the social exclusion phenomenon have a medium and even large dependency and demonstrate cause-effect relationships. Management of customers with the disfunction of medical personnel social requires using other means of communication and building relationships on facts. The communication model between medical personnel and the customer should be founded on a moderate paternalistic model, which is based on facts and documents. The result will be a reduction in service time, which will affect consultation time, financial savings, and an increase in medical personnel efficiency.

Originality/Value. In the research of socially isolated people's health problems, three aspects was distinguished: health problems caused by social isolation, health problems that cause social exclusion, and health conditions that are difficult to treat due to social isolation.

Paper type – empirical.

Keywords: management; the customer with disfunction; health organization; social exclusion; analysis of health care markets; health and economic development.

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Вплив соціальної ізоляції на лікування пацієнтів у медичних закладах Польщі

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Мета роботи – продемонструвати зв'язок між соціальною ізоляцією та вищими витратами на лікування споживачів залежно від цього соціального сектору, на відміну від інших споживачів, які не є безробітними і не живуть у злиднях.

Дизайн/Метод/План дослідження. Застосовано метод опитування, доповнений методом спостереження на місці дослідження. Автори публікації провели дослідження якісним методом, формалізували співбесіду з медичним персоналом. Це дослідження було проведено в університетській лікарні у Вроцлаві у 2018 році.

Результати дослідження. Будь-яка організація охорони здоров'я повинна створювати добрі стосунки всередині організації та переважно зовні. Однією з частин таких відносин є пацієнт, якого автор називає "клієнтом", оскільки кожна людина витрачає гроші на організації охорони здоров'я, що веде до нормального функціонування лікарні. Особи, які приймають рішення в системі, повинні постійно робити вибір та шукати альтернативні шляхи вимірювання витрат на хворобу. Одним із факторів, що шкодить оптимізації масштабу медичних послуг, є явище соціальної ізоляції, яке суттєво впливає на суспільство. Проблеми соціально ізольованих людей – це депривація, як відсутність доступу до необхідного рівня якісних, безпечних та ефективних медичних послуг та культурної компетентності для надання таких медичних послуг. Висновки попереднього аналізу показують, що взаємозв'язок між аналізованими сферами та явищем соціальної ізоляції мають середню і навіть велику залежність і демонструють причинно-наслідкові зв'язки. Управління клієнтами з порушенням соціального стану медичного персоналу вимагає використання інших засобів спілкування та побудови відносин на фактах. Модель спілкування між медичним персоналом та клієнтом повинна базуватися на поміркованій патерналістській моделі, яка базується на фактах та документах.

Оригінальність/Цінність/Наукова новизна дослідження. У дослідженні проблем зі здоров'ям соціально ізольованих людей було виділено три аспекти: проблеми зі здоров'ям, спричинені соціальною ізоляцією, проблеми зі здоров'ям, що спричиняють соціальну ізоляцію, та стан здоров'я, який важко лікувати через соціальну ізоляцію.

Тип статті – емпіричний.

Ключові слова: менеджмент; управління; замовник з дисфункцією; організація охорони здоров'я; соціальне відчуження; аналіз ринків охорони здоров'я; охорона здоров'я та економічний розвиток.

Влияние социальной изоляции на лечение пациентов в медицинских учреждениях Польши

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Цель работы – продемонстрировать связь между социальной изоляцией и более высокими затратами на лечение клиентов в зависимости от этого социального сектора, в отличие от других клиентов, которые не являются безработными и не живут в бедности.

Дизайн/Метод/План исследования. Применен метод опроса, дополненный методом наблюдения на месте исследования. Авторы публикации провели исследование качественным методом, формализованным интервью с медицинским персоналом. Это исследование было проведено в Университетской клинике Вроцлава в 2018 году.

Результаты исследования. Любая медицинская организация должна наладить хорошие отношения внутри организации и в основном за ее пределами. Одной из составляющих таких отношений является пациент, которого авторы называет «клиентом», поскольку каждый человек тратит деньги на организацию здравоохранения, ведущую к надлежащему функционированию больницы. Лица, принимающие решения в системе, должны постоянно делать выбор и искать альтернативные способы измерения стоимости болезни. Одним из факторов, препятствующих оптимизации масштабов медицинских услуг, является феномен социальной изоляции, который существенно влияет на общество. Проблемы социально изолированных людей – это депривация, как отсутствие доступа к необходимому уровню качественных, безопасных и эффективных медицинских услуг, а также культурная компетентность для оказания таких медицинских услуг. Выводы пост-анализа показывают, что отношения между анализируемыми областями и феноменом социальной изоляции имеют среднюю и даже большую зависимость и демонстрируют причинно-следственные связи. Управление клиентами с нарушением функций медицинского персонала требует использования других средств коммуникации и построения отношений на основе фактов. Модель коммуникации между медицинским персоналом и клиентом должна быть основана на умеренной патерналистской модели, основанной на фактах и документах.

Оригинальность/Ценность/Научная новизна исследования. При исследовании проблем здоровья социально изолированных людей были выделены три аспекта: проблемы со здоровьем, вызванные социальной изоляцией, проблемы со здоровьем, вызывающие социальную изоляцию, и состояния здоровья, которые трудно лечить из-за социальной изоляции.

Тип статьи – эмпирический.

Ключевые слова: менеджмент; управление; заказчик с дисфункцией; организация здравоохранения; социальная изоляция; анализ рынков здравоохранения; здоровье и экономическое развитие.

1. Introduction

The healthcare system in Poland is an organism that requires continuous monitoring by the management decision-makers. This action is necessary, even if only because of the varying structure of supply of customers which has an increasingly negative effect on customers needs and expectations with respect to health services. Therefore, the demand for health services will continue to be evaluated as a market phenomenon growing not only in quantitative, but also, as shown in earlier observations, in qualitative terms.

We can conclude that customers awareness is increasing, which in turn increases the demand for healthcare and medical services. Customers expect a higher level of service to be provided by medical personnel through better and more accurate diagnosis, positive interpersonal relationships and improved speed of service, taking place on the basis of service "without queues" (*Gallouj, & Kaabachi, 2011*).

Another problem that has been diagnosed in the healthcare system is the phenomenon of social exclusion, which is occurring more frequently and reaching a mass character. A customer with disfunction who has smaller financial possibilities, other illnesses, and it need more attention and time on the part from medical staff.

This is a consequence of the economic crisis, the low level of per capita income and an increasing unemployment rate recorded by the BEAL method.

One of the factors impeding the process of optimizing the provision of services in the field of public health is the phenomenon of poverty in society, which is one of the most important public policy objectives (*Bukowski, & Magda, 2013*). With the development of economy, the phenomenon of poverty has become a component of public intervention at a time when interest in policies to improve the situation of the poor is not only the result of moral arguments, but also relates to the political and economic aspects of the analyzed phenomenon.

Dynamic changes in the health system from the early 1990's to the present day have brought about a significant number of modifications on the plane of legal and formal, organizational, staffing, competence, insurance and financial sectors. The most important factor in determining the evolution of the health care system is the form and method of financing of the health system. The aim is to meet the needs of people using medical services and at the same time account for a stable source of income for employees of the system and systematic investments in fixed and mobile assets.

2. Theoretical background

2.1. Specificity of a socially excluded customer

Social withdrawal from various aspects of life leads to a person becoming poorer and less socially active than those who are free of social exclusion.

It should be remembered that the poor do not have to be excluded, and the excluded do not necessarily have to be poor, although both of these phenomena are often seen to accompany each other (*Gallouj, & Kaabachi, 2011*).

This statement is identical to the insights of A. Smith, who saw poverty not only in the material realm, but also in the immaterial.

The above statement concurs with the insights of A. Smith (late eighteenth century), who recognized that poverty existed not only in the material realm, but also in the immaterial. He identified the concept through welfare, the possession of which allows one to feel worthy (without a sense of shame) in a public space (*Malloy, & Evensky, 1995*) and exist in a dignified and financially self-sufficient manner.

Poverty must not be seen as a solely economic problem, but rather as a multidimensional phenomenon that includes both a lack of income and the opportunity to live in decent conditions (*Wrzesiński, 1987*). Such welfare thus depends on the socio-economic context and the economic environment (*Sen, & Roy, 1996*).

In relation to this phenomenon, the concept of marginalization is often used, which is defined as exclusion from participation in the social life of individuals, groups or societies on a global basis in relation to their social environment (*Rhoads, & Szelenyi, 2011*).

It is understood that two main factors contribute to exclusion, frequently occurring simultaneously or in a sequential fashion.

It concerns the phenomenon of unemployment and poverty (*Nowak, 2012*), which can occur in a variety of configurations and relationships. Different situations may occur in which a person who is employed and receiving a salary sufficient for at least a decent life will be released, and will fall into the group of unemployed persons as a consequence of the use of savings, resulting in a need to lower the standard of living which may degenerate into a state of poverty.

In another case, a person employed as a low-paid employee and supporting several children may be called poor or living in poverty. According to legal and formal regulations, Polish law distinguishes different definitions of the poverty concept; the so-called subsistence level (defined in 2017 in the amount of 31,24 zloty per person per day) (*Starzenie się i Polityka Zatrudnienia, 2015*) as opposed to the so-called subsistence minimum (i.e., the amount of PLN 16,11 per person per day). In 2015, the social group classifying for the minimum subsistence level of 33% of society worldwide. Such a mass phenomenon indicates the problem's significance and points to the aspects that have to be resolved.

The category of social exclusion is broader and more complex than poverty, and at the same time, vaguely covered in the literature. This term is derived from the definition of relative deprivation formulated by J. Townsend. It refers to the living standard below, which is not guaranteed to play social roles and participate in social relations and typical behavior characteristics and find value in society's membership (*Townsend, 1979*).

Social isolation creates the problem of getting necessary health care medical services, such as:

– primary care;
– psychiatric and substance use of treatment services;
– emergency department and observation care;
– prenatal care;
– transportation;
– diagnostic services;
– home care;
– dentistry services;
– a robust referral structure to provide all individuals in the community with access to the full spectrum of health care services (*Bhatt, & Bathija, 2018*).

For homeless people and other socially disadvantaged people, adequate health care often lies outside the confines of a strictly medical approach and includes broader social determinants of health, such as housing, income, and family supports (*O'Toole, Johnson, Aiello, Kane, & Pape, 2016*).

Such researches' limitations: Among these research limitations is the absence of direct measures of health outcomes and the limited methodology for cost analyses. Many studies reported service utilization data as a proxy for either health outcomes or cost calculations, and the lack of consistency introduces confusion about the findings. For instance, several outpatient visits may indicate higher costs or worse health outcomes in some studies and appropriate use of lower-cost services that reduce use of more expensive services. Besides, mainly cost-savings analyses do not account for inflation, and consistency in reporting both per-person and aggregate costs is needed for a better comparison (*Steketee, Ross, & Wachman, 2017*).

Based on the secondary data derived from research conducted by the Public Opinion Research Centre (Centrum Badania Opinii Społecznej (CBOS)) in September of 2013, it can be seen that the factors which mostly affect the growth of the risks of exclusion in society are:

– material situation;
– health (*Green, & Tones, 2010; Evaluation and prediction of the material conditions of life of Poles, 2013; Spaaij, Magee, & Jeanes, 2014*).

In social groups affected by exclusion, those when deteriorating financial situation and health status are at most significant risk. Consequently, this has an impact on the growth of the treatment total cost. In Poland, conducted studies indicated a link between social exclusion and an increase in the unit cost of treating people classified in this group.

Many scientific publications and research reports conducted at the level of a country or region indicate that in recent years the studies were performed whose interest was the following phenomena: poverty, unemployment, and the level of society and social exclusion. However, these phenomena' impact on treating customers' rising healthcare system costs has not been generally analyzed.

The analyzed data shows that social problems associated with poverty and social exclusion are widely spread in Poland.

According to those surveyed, groups at risk of marginalization (an intermediate state of social exclusion) include the unemployed, the sick, the disabled, and the poor. As many as 43 percent of respondents believe that the unemployed have the least chance of achieving their needs; 20 percent of respondents indicated that the sick and the disabled are at risk of marginalization. However, according to 18 percent of respondents, this phenomenon may also apply to the poor and impoverished.

These results indicate that the marginalization phenomenon in social perception is related to unemployment, poverty, and poor health.

There are also other significant results, which show that every eleventh respondent stated that they felt being excluded. In this group, the majority pointed to economic factors and their health situation. A total of 46 percent of respondents declared that they were excluded because of their financial situation, and 31 percent pointed to health reasons.

That indicates that a large group of ill people, often with low-income and requiring additional care, are already excluded.

By summarizing, it can be stated emphatically that in Poland, research has been conducted on the measurement of the number of excluded people, the causes of marginalization, unemployment, and methods for their limitation, but an in-depth analysis of the social impact of these opposing social and economic phenomena that involve the more significant element of Polish society has not yet been performed.

2.2. French experience in the subject of the study

In France, an interesting study was conducted, which the author used results for this study. The foreign data were compared with the original data obtained by the author during the study.

In brief, the study was intended to assess the level of cost absorbency in health care services provided to typical customers showing no impairment and those with so-called social exclusion.

In the study group, indicators of uncertainty were collected, which formed the basis for substantive studies. The analysis benefited from the classification of monetary indicators, which focused on the financial resources held by representatives of French society. It was assumed that a person was economically excluded when they achieved income less than or equal to 560 euros per month per person in a French household. Secondly, the poverty rate is identified based on the number of recipients of social assistance. That indicator also identifies the "conditions of life," defined by the National Institute of Statistics and Economic Studies (*INSEE, 1991*), based on a ratio measured at the level of 28 values of everyday life.

The analysis plane of inequality aspects had a three-dimensional character, comprising of:

1) economic and social status of the person (the following indicators were computed: the number of cars owned, continuous or periodic employment, income level, and the social group classification);
2) social and demographic indicators (separated by age, place of residence, gender, and ethnicity);
3) environmental indicators, which included living conditions, working conditions, and social support.

In addition to the formulation of analysis domains, the researchers built the goals they wanted to achieve into both research stages.

In the first stage, the focus was on identifying the relationship between exclusion and the cost of treating the customer. That was quantitative, and the objectives were as follows:

1) to identify the customers with disabilities - socially "disadvantaged" - and measure the incidence of socially excluded customers;
2) to assess the impact of social disadvantage on the cost of treatment in hospitals;
3) to assess the personal needs and the need for health care in the impaired group of customers, measuring the level of the costs according to groups: typical customers and customers from socially disadvantaged groups;
4) to determine the level of the additional amount necessary to treat people requiring this special assistance;
5) to propose solutions to the problem of socially disabled customers for the hospitals' management.

In turn, in the second stage of the research, more attention was focused on determining this phenomenon's specifics with hospital customers. The objectives of this study were as follows:

1) improve the tools developed in the first study to improve the disadvantage identified in the selected measuring tools;
2) review the possibility of replacing the quantitative questionnaire evaluating the quality of life;
3) check the sensitivity of the measuring device.

3. Problem statement

Purpose – to demonstrate the links between social exclusion and the higher costs of treating customers depending on this social sector, unlike other customers who are neither unemployed nor live in poverty.

4. Methodology and research results

In the external study, a survey method was used, supplemented with a method of observation at the study site. The author performed research using the qualitative method, formalized interview with medical personnel. This research was performed at University Hospital in Wroclaw in 2018.

In this paper, the author cites collected research data, which is used to demonstrate the links between social exclusion and the costs of treating customers.

The results were based on a survey questionnaire method performed on a composite sample of about 2,500 people, tested in two stages of research. The considerations covered several areas: health, financial situation, cultural integration, relations with other people, resources, property, and inheritance.

Table 1 presents the characteristics of the respondents' groups and includes a structure of people who were not included in the analysis of research data for various reasons.

People included in the study were divided according to the criterion of social disadvantage. The entire sample was divided into three groups. The first group included customers without compromise, those who do not show any problems associated with exclusion. The second group of customers covered people having a moderate disability. Customers qualifying for the third group are those with a high degree of social impairment, showing a significant or severe disability.

Table 1

Structure of the research sample*

Types of groups	Survey 1	Survey 2
Participants	1094	1475
Deceased	7	4
Health deteriorated	80	0
No change, staying on the ward	36	483
Questionnaires not completed	320	1
Questionnaires completed but poorly filled	13	0
Language	49	75
Refusals	85	93
People included in the study	504	696

*Source: Compiled based on the studies of the "Avicenna" group of hospitals in Paris.

Table 2 data shows the respondent situation's structure, where the dominant group of respondents was derived from two groups belonging to the broader labor market; employed, i.e., economically active and those made redundant (inactive).

Table 2

The structure of respondents*

	Survey 1		Survey 2	
	Number	Percent	Number	Percent
Professionally active	284	56,3	305	43,8
Registered unemployed	27	5,4	59	8,5
Unemployed not registered	16	3,2	24	3,2
Students	16	3,2	19	2,7
Dismissed	113	22,4	181	26,0
Housewives	25	5,0	40	5,7
Other inactive	23	4,5	59	8,5
Unknown	0	0,0	9	1,3
Total	504	100,0	696	100,0

*Source: Compiled based on studies of the "Avicenna" group of hospitals in Paris.

Together, these two groups represented 78.7% of customers in the first stage and 69.8% in the second stage. This information shows that a pool of 90% of respondents is people of working age, and only a small part - less than 10% - of those work in pre or post-production.

Within the health area, three indicators were considered: mortality rate (*Morbi*), risk index (*RISIKI*), including the terms of indication, e.g., concerning working conditions (*Risk*) (*IDEM*) and, in the second stage, the rate of disability (*INCAP*).

In terms of health, the individuals reported a more excellent handicap status in the first study than in the second. As many as 58.2% of respondents were affected by impairment to at least a moderate degree in the first study. Whereas in the second study, this was a smaller group of subjects and represented 14.5% of the surveyed customers. This factor has a significant impact on the phenomenon of exclusion only among respondents from the first stage of research. In the second stage, the relationship between social exclusion and quality of health was not established (*Table 3*).

Table 3

The situation of the respondents in the health area*

Exclusion level	Survey 1		Survey 2	
	Number	Percent	Number	Percent
No impairment	144	28,6	595	85,5
Moderate impairment	274	54,4	90	12,9
The high degree of impairment	19	3,8	11	1,6
Unidentified class	67	13,2	0	0,0
Total	504	100,0	696	100,0

*Source: Compiled based on studies of the "Avicenna" group of hospitals in Paris.

Table 4 presents data showing the state of impaired respondents in terms of the so-called resources with the following indicators: quality of life-based on the income (revenue) amount and uncertainty, which is the so-called poverty rate (PRE CAT).

Table 4

The situation of the respondents in terms of resources*

Exclusion level	Survey 1		Survey 2	
	Number	Percent	Number	Percent
No impairment	97	19,2	185	26,6
Moderate impairment	147	29,2	345	49,6
The high degree of impairment	140	27,8	166	23,8
Unidentified class	120	23,8	0	0,0
Total	504	100,0	696	100,0

Source: Compiled based on studies in the "Avicenna" group of hospitals in Paris.

In this area of research, most people demonstrated a moderate or high degree of deprivation. That indicates that income is an essential factor that affects the degree of social exclusion.

Another research area involves the so-called cultural integration, which includes two indicators, i.e., enrolment ratio (SCOL) and the index of cultural activity (CULTI). They show the level of education and cultural activity of respondents and indicate the average degree of influence on the impairment creation due to cultural integration (*Table 5*).

Table 5

The situation of the respondents in the area of cultural integration*

Exclusion level	Survey 1		Survey 2	
	Number	Percent	Number	Percent
No impairment	166	33,0	264	37,8
Moderate impairment	176	34,9	287	41,1
The high degree of impairment	129	25,6	130	18,6
Unidentified class	33	6,5	15	2,5
Total	504	100,0	696	100,0

Source: Compiled based on studies in the "Avicenna" group of hospitals in Paris.

In another area, the author analyzed relationships with other people, based on two indicators: the index of family relationships and relationships with related indicators, particularly contact with neighbors. Just as in cultural integration, the analysis area can also be defined as an average range of topics related to social exclusion (*Table 6*).

Table 6

The situation of the respondents in the area of relationships with other people*

Exclusion level	Survey 1		Survey 2	
	Number	Percent	Number	Percent
No impairment	217	43,0	308	44,2
Moderate impairment	183	36,3	176	25,3
The high degree of impairment	55	11,0	212	30,4
Unidentified class	49	9,7	0	0,0
Total	504	100,0	696	100,0

*Source: Compiled based on studies of the "Avicenna" group of hospitals in Paris.

People spend their lives surrounded by family, friends, acquaintances, and people they meet or pass on the street. Public, professional, and personal life largely depends on the behavior impact of other individuals, groups, and communities (*Aronson, 1998*). Effective communication allows the process of interaction between people, which is advisable and even necessary for the proper functioning of an organization. Of particular significance is the communication process in organizations becoming "open" to the environment where employees maintain permanent relationships with their customers. Due to the composition stability of personnel (small changes in employment), it is easier to manage internal contact, a situation that is different in the case of relations with the public.

Table 7 demonstrates data showing the level of residential involvement in the area of disability relating to social exclusion, including the interior comfort index (CI), relating to the quality of domestic appliances and the housing location indicator (LOCA), which is a measure of location relative to places of cultural, labor and other significance.

Table 7

The situation of the respondents in the area of housing*

Exclusion level	Survey 1		Survey 2	
	Number	Percent	Number	Percent
No impairment	62	12,3	321	46,1
Moderate impairment	252	50,0	297	42,7
The high degree of impairment	127	25,2	78	11,2
Unidentified class	63	12,5	0	0,0
Total	504	100,0	696	100,0

*Source: Compiled based on studies of the "Avicenna" group of hospitals in Paris.

In analyzing the two indicators identified for use in this area, it was noted that there was a large correlation between exclusion and the housing in the first test stage. In contrast, in the second stage, an average degree of the relationship was demonstrated.

Table 8 depicts the results of research in inheritance. The analysis included two evaluation criteria: tangible assets (IMMO ratio) and movable assets (MOBI ratio).

Analysis of the resulting findings indicates that there are important links between the indicators and the phenomenon of social exclusion in the inheritance. In the studies, the total impairment accounted for 82.2% in the first study and 79.7%. That was a high rate, confirming the impact of this area on the advent of marginalization in society, leading to social exclusion.

Table 8

The situation of the respondents in the area of inheritance*

Exclusion level	Survey 1		Survey 2	
	Number	Percent	Number	Percent
No impairment	52	10,3	133	19,1
Moderate impairment	161	32,0	298	42,8
The high degree of impairment	253	50,2	257	36,9
Unidentified class	38	7,5	8	1,2
Total	504	100,0	696	100,0

*Source: Compiled based on studies of the "Avicenna" group of hospitals in Paris.

The research summary is included in *Table 9*, which shows the people according to the disability degree. It illustrates that 67% of respondents in the first stage and 74% in the second stage have a moderate or high degree of disability.

Table 9

Distribution of respondents according to the criterion of a disability group*

	Survey 1	Survey 2
No impairment	33	26
Moderate impairment	42	55
The high degree of impairment	25	19

*Source: Compiled based on studies of the "Avicenna" group of hospitals in Paris.

Of the six thematic areas analyzed, three of them (resources, housing, and inheritance) demonstrated a significant social exclusion impact.

Health and cultural integration are domains whose relationship to social exclusion is above average but cannot be classified as factors showing significant interaction with the analyzed relationship.

The weakest link was shown in the relationships area with other people, which should be treated as a result of the social exclusion phenomenon, rather than the cause of its occurrence.

5. Conclusions

Based on a literature query and secondary data presented based on analysis by a team led by Camal Gallouj and his research, the authors presented the conclusions in ex-post and ex-ante evaluation.

Ex-post conclusions refer to a past situation, to the historical background; previous situation, which allowed to diagnose the impact of that situation on the current state, which is based on the collected data.

The second analysis's conclusions include interpretations of the status quo and form of the starting point to predict the situation in the health system without any interventions with those characteristics assigned to the socially excluded. The ex-post analysis conclusions show that relationships between the analyzed areas and the social exclusion phenomenon have a medium and even large dependency and demonstrate cause-effect relationships.

Diagnosing a customer with one of the factors in the resources, housing, and inheritance can qualify for a group of people with deprivation in social exclusion. Those who qualify for this group have the following properties, based on a qualitative analysis carried out in the second stage of the research.

Such characteristics include:

1. Customers with social disabilities remain in hospital longer, increasing the customer's per-unit cost to the healthcare system compared to customers without such disfunction.

2. The study showed a typical need to extend the stay by 1 to 2 days. In terms of the number of Poles belonging to socially excluded groups, assuming that 1 in every 100 Poles will be hospitalized once a year, hospitals' annual effect will be in the region of 43.000 people hospitalized with this disfunction, which amounts to between 43.000 to 86.000 people-days. That is a significant amount of extra working time and consequently spent funds.
3. In terms of the total for the entire study sample, this represents a total of 21.345 more days in hospital per annum than for customers not affected by impairments in social exclusion.
4. This value translates into additional costs, or the equivalent of approximately 3.300 additional hospital admissions, which is already a considerable expense. The cost estimated based on totals of an average of 11.000.000.000 Euros annually across the entire French health system. In Poland, this cost is lower in financial terms. However, concerning per capita expenditure, it is undoubtedly higher, and thus more crucial for the balance and realignment of supply to meet customers' needs (*Table 10*).

Table 10

Roles of paternalistic model members*

Role of the medical personnel	Role of the customer (patient)	Role of the family
principal	passive	No action
authority	submissive	
decisive	imitative	

*Source: Compiled based on (*Kaba, & Sooriakumaran, 2007; Anna, 2018*).

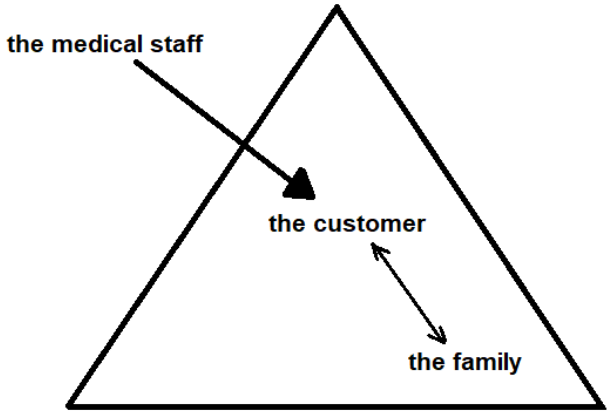

Fig.1. The relation between participants in a paternalistic model*

**Source:* Compiled based on (*Vastag, 2015: 172-174*).

Management of customers with the disfunction of medical personnel social requires using other means of communication and building relationships on facts. The communication model between medical personnel and the customer should be founded on a moderate paternalistic model, which is based on facts and documents. The result will be a reduction in service time, which will affect consultation time, financial savings, and an increase in medical personnel efficiency.

Cost savings for the medical system associated with the care of socially isolated people can be achieved as follows: 1) ensuring early detection by social workers of social isolation manifestations of vulnerable groups; 2) development of scenarios for the improvement of the medical services by working groups formed in communities as a result of partnerships between health care providers and clients (patients); 3) dissemination of telecommunication technologies to supplement the essential medical services necessary for monitoring the health of socially isolated people and providing them with timely electronic consultations.

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7. The competing interests

The authors declare that they have no competing interests.

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