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Analysis of the feelings of patients with HIV/AIDS and HCV in contact with health professionals. Assessment based on cases of stigmatisation and discrimination

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Summary

Aim. This study aimed to investigate incidences of stigmatisation and discrimination by selected health professionals against patients with HIV/AIDS and HCV, and to assess how these affected feelings in both groups.

Material and method. The study involved 160 patients – 80 diagnosed with HIV/AIDS in the baseline group and 80 with HCV in the comparison group. Inclusion criteria were a diagnosis of HIV/AIDS or HCV and an age between 18 and 65 years. Patients were recruited from among patients treated in two outpatient clinics of the University Hospital in Krakow.

Results. Incidents of stigmatisation and discrimination were observed significantly more often in the HIV/AIDS group compared to the HCV group. According to the patients, incidents of stigmatisation and discrimination on the part of medical staff occur due to fear and a sense of threat from infection with the viruses. The experience of stigmatisation and discrimination by patients manifests itself in the impediment or denial of healthcare services by medical professionals. Some of the medical staff blamed the patients for the infection, expressed disrespect and verbal aggression towards them, and treated them worse when they found out about the infection. According to the patients surveyed, their emotional state depended on the nature of the relationship with the medical staff triggered by stigmatisation and discrimination.

Conclusions. Stigmatisation and discrimination by medical staff against patients were, according to the respondents, linked to fear of infection but confirmation of this relationship would require further research. In the course of these cases, patients experienced pejorative verbal evaluation, impediment or denial of health services, which could have specific health consequences for them. These types of attitudes, according to the respondents, had a negative impact on their emotional state.

Key words: stigmatisation, discrimination, emotional state

Introduction

HIV and HCV – routes of infection and their effects, epidemiology

HIV (human immunodeficiency virus) is a virus that can cause a disturbed immune response and lead to the emergence and development of AIDS (acquired immune deficiency syndrome). The direct consequences of HIV infection are immune dysfunction, while indirectly it can cause infections with opportunistic microorganisms and the development of cancer [1]. HIV infection can occur through sexual contact, tissue disruption, or perinatal transmission from an infected mother to her child [2]. HCV (hepatitis C virus) is a virus that causes early-phase acute hepatitis, which then progresses to chronic hepatitis C. The majority of patients are asymptomatic, which means that patients are in many cases unaware of their infection. The remote effects of HCV in patients can be cirrhosis and hepatocellular carcinoma, with extrahepatic manifestations in some patients [3]. As with HIV, HCV infection occurs through contact with infected blood through breaches of skin and mucous membranes [4]. Among medical personnel, HIV and HCV infection can occur during occupational exposure. The use of safety procedures and available personal protective equipment can significantly reduce the risk of infection but does not completely exclude the risk in this regard [5].

Since the detection of both viruses in the 1980s – HIV was detected in 1983 and HCV in 1989 – efforts have been made to develop effective pharmacotherapy [6]. For HIV infection, antiretroviral therapy (cART – combined antiretroviral therapy) leads to long-term inhibition of viral replication, restoring the immune system. Combined antiretroviral therapy is an effective method of preventing HIV infection from progressing to full-blown AIDS. Although treatment does not eliminate the presence of the virus, it allows infected patients to live and function normally [7, 8]. In the case of HCV, treatment consists of eradicating the virus with direct-acting antiviral (DAA) pharmacotherapy, and the therapy leads to the inhibition of the progression of liver fibrosis and reduction of the risk of hepatocellular carcinoma.

Currently, treatment of hepatitis C allows HCV to be eliminated from the body [9]. According to WHO epidemiological data, there are currently about 38.4 million people living with HIV and about 58 million with HCV worldwide. For HCV, the number of new diagnoses is estimated to be around 1.5 million people per year. For HIV, these figures have been very similar in recent years at between 1.5 and 1.7 million new infections [10, 11].

Stigmatisation and discrimination: causes, course, and effects

Stigmatisation and discrimination are complex, interdisciplinary phenomena and are studied at many levels, leading to ambiguity and multifacetedness in their understanding and theoretical approaches [12]. Stigmatisation (from the Greek word *stigma* meaning sign) refers to the negative labelling associated with an attitude of social disapproval and the negative perception of a particular group of people due to the attribution of certain devaluing characteristics or a discrediting attribute to that group [13]. Stigma can create fear and stigmatising attitudes can be a tool to increase the stigmatising person's sense of control. People may avoid stigmatised people if they evoke in them a sense of threat [14]. The stigmatisation process may be significantly determined by the source of the stigma, which is related to whether or not blame can be attributed to the creation of the stigma and how this degree of offence is perceived. This is particularly relevant when the social reaction has the hallmarks of punitive ostracism associated with, for example, moral rejection, labelling, or condemnation [15-17].

There are three types of stigma in relation to the patient groups studied, which refer to (1) direct experiences of stigma, i.e. so-called enacted stigma, which refer to a situation in which a person has been subjected to prejudice or discrimination on the basis of serological status; (2) expectations of future expected stigmatising behaviour – prejudice and discrimination – from the environment and in the event of disclosure of serological status, i.e. so-called anticipated stigma; and (3) internalised negative beliefs about oneself in relation to the infection – shame, guilt and lack of value (internalised stigma) [18-21.] There is also the phenomenon of health-related stigma related to chronic conditions that are socially discredited [22, 23].

The concept of discrimination is derived from the Latin language (*discriminatio*) and means distinction and unequal treatment, selective assessment, and is based on the possession of a particular attribute by a person or group [24, 25]. Minority groups are subjected to discrimination through the attribution of an attribute considered by the dominant group to be socially significant, emotionally salient, and negatively evaluated because of a perceived threat [26]. Discriminatory manifestations involve impeding equal and fair access to social rights, privileges and resources. Within discriminatory practices, the distinctions between 'other' and 'stranger' become apparent. Discrimination is a type of attitude with a cognitive component in the form of a stereotype, an emotional component in the form of prejudice, and a behavioural component in the form of discriminatory actions [26, 27]. Discrimination is therefore an experiential manifestation of stigma, and in the case of HIV patients, it occurs when a person diagnosed with HIV is discriminated against because of his or her serological status [19]. Its manifestation can be unequal access to health care [26]. The latest strategy of The Joint United Nations Programme on HIV/AIDS UNAIDS, "*Global AIDS Strategy 2021-2026 – End Inequalities. End AIDS*" points out that one of the main factors that stand in the way of ending the AIDS epidemic is the stigmatisation and discrimination against people with HIV/AIDS, with the result that these people do not have fair and equal access to medical care and other forms of social support [28].

Emotional state

Emotions in everyone's life are a constant and continuous component of functioning and experience in everyday life [29, 30]. Given the diversity of existing theoretical assumptions and research, the use of the conceptual category "emotions" poses a methodological problem due to its multidimensionality and ambiguity [31]. The unifying element of many approaches is the treatment of emotions as complex phenomena that permeate the whole of human psychological life and that activate human actions [29, 30]. Currently, most researchers emphasise that the sources of human emotions lie in the way we evaluate events in the world around us [31, 32].

Among the definitions attempting to integrate different approaches is the one proposed by the authors of the Polish textbook 'Academic Psychology', which says, "Emotion is a subjective mental state, triggering a priority for an associated programme of action. The feeling of emotion is usually accompanied by somatic changes, facial and pantomimic expressions and specific behaviours" [33, p. 514].

The three classical dimensions of emotions include their sign, intensity and content. Emotions constitute a three-component system including neural, expressive-motor and subjective, i.e. feelings [31, 33]. Emotions have different functions in the regulation of behaviour, and due to the mechanisms of their formation, a proposal for a taxonomy has been created considering two groups of emotions: automatic (primary) and reflexive, related to the judgement of situation and value judgement [33, 34]. Another division is the distinction between primary and derived emotions, arising from the juxtaposition of primary emotions. Emotion researchers do not agree on a list regarding primary emotions. These include fear, anger, sadness, joy, disgust, shame, guilt, interest, contempt, surprise and anticipation [29, 33, 35].

The emotional state is part of the mental state encompassing elements of psychological well-being as well as psychological symptoms [36]. The ability to recognise, express and modulate one's emotions is recognised as one of the core components of mental health, as well as an important mediator of coping with stressful situations, and impairment of this ability may be a risk factor for mental and physical disorders [37]. There are significant corelations between emotional states and susceptibility to illness, disorders and the healing process. Negative emotions adversely affect health and can cause psychosomatic disorders [30, 38].

State of research

There are a number of international studies in the literature on the stigmatisation and discrimination of HIV and HCV patients by healthcare professionals, which present both the sources and a wide range of such attitudes. These works include an analysis and evaluation of the relationship between stigmatisation and discrimination of patients and their emotional state, as well as conclusions showing a pejorative effect of such attitudes on the patients' mental state. These publications are provided in the references at the end of the article and a detailed description of them is included in the discussion [39-46]. The latest publications date from 2020 to 2022 and include, among others, reviews of literature and meta-analyses [47-50].

In the meta-analyses and reviews of literature on HIV/AIDS and HCV cited by the authors no references to research on Polish experiences in this area were found. An analysis of literature on the state of research on this problem in Poland has shown that although the problem of stigmatisation and discrimination of patients is described in many publications (some of them were mentioned in an earlier part of the article describing stigmatisation and discrimination: causes, course and effects), empirical research on the effect of stigmatisation and discrimination of seropositive people by medical personnel over the last 20-25 years has been undertaken relatively rarely [51-58]. Particularly, there have been no studies of patients diagnosed with HCV.

It is worth emphasising that among the publications addressing this issue among patients with HIV/AIDS, there are no such publications that would show the causes, course and effects of stigmatising and discriminatory attitudes, especially with regard to the impact on the emotional state of patients. A more holistic approach to the empirical research into the problem of stigmatisation and discrimination of people with HIV/AIDS in Poland can be found in two publications – from 2011 and 2013 [59, 60].

It should also be noted that the problem of stigmatisation and discrimination of seropositive patients is raised at the level of expert and systemic institutions in the health sector, some of which – in addition to describing the situation – give indications and recommendations on what interventions can be taken to at least partially alleviate the problem. This is evidenced, among others, by the scientific publication from 2017 "Prevention of HCV infections as an example of integrated public health measures to reduce blood-borne infections in Poland" emphasising this problem in relation to injecting drug users infected with HCV – a group subjected to particularly strong social exclusion – which experiences limitations in access to HCV diagnostics and treatment due to discriminatory practices resulting from stigmatisation [61].

The government health policy program "Antiretroviral Treatment of People Living with HIV in Poland" for the years 2022-2026 signals the problem of discrimination and social stigmatisation, as manifested in the fact that people infected with HIV do not decide to inform medical staff [62]. The objective of the "Schedule for the implementation of national HIV prevention and combating AIDS developed for the period 2022-2026" coordinated by the National AIDS Center, among others, provides support for combating stigmatisation and discrimination and provides access to care through educational and information activities based on quoted studies of, inter alia, knowledge and beliefs of Poles about HIV/AIDS and the related behaviours [63].

Aim of the study

This study aimed to assess the experiences of patients with HIV/AIDS and HCV related to incidents of stigmatisation and discrimination by selected health professionals and their impact on the feelings of patients in both groups.

The main research problem was to determine empirically whether there is any relationship between stigmatisation and discrimination of HIV/AIDS and HCV patients by healthcare professionals and emotional status of these patients. To do this, it was decided to check first whether stigmatisation and discrimination were present in both groups of patients, as described in the literature, and then what feelings were associated with contacts between patients and persons providing them with health services. In addition, we tried to find the answer to the question: what are the characteristics of the attitudes of the medical staff towards these two groups of patients and what, in the opinion of the patients, their causes and effects may be. This was followed by the investigation whether there were any differences in this matter between patients in the HIV-positive background group and those in the HCV comparative group.

Material and methods

A total of 160 participants, including 80 diagnosed with HIV/AIDS and 80 infected with HCV, took part in the study conducted in the years 2013-2014. The study participants were recruited from among patients under the control of the Acquired Immunodeficiency Outpatient Clinic of the Clinical Department of Gastroenterology and Hepatology and Infectious Diseases of the University Hospital in Kraków. Patients with HCV were recruited from among the patients of the Viral Hepatitis Outpatient Clinic of the Clinical Department of Gastroenterology and Hepatology and Infectious Diseases of the University Hospital in Krakow. Interviews were conducted at both outpatient clinics among patients who gave written consent. Patients participated on the basis of random sampling, who met the inclusion criteria: diagnosis of HIV/AIDS or HCV and age between 18-65 years. The average duration of infection and treatment in the outpatient clinic did not differ between patients with HIV and HCV, with a median of 5 years. The demographic characteristics of the study groups are shown in Table 1.

Table 1. **Demographic characteristics of the patient groups studied**

Group characteristics		Group				p
		HIV		HCV		
		Number	%	Number	%	
Gender	Male	60	75.0	42	52.5	0.003
	Female	20	25.0	38	47.5	
Education	Primary, vocational	23	28.7	23	28.7	NS
	Secondary	38	47.5	32	40.0	
	Higher	19	23.8	25	31.3	
Civil status	Single	55	68.8	21	26.3	< 0.001
	In a relationship	25	31.3	59	73.8	
Place of residence	Small city up to 20,000	20	25.8	21	26.3	NS
	City of over 20,000 to 200,000	12	15.4	17	21.3	
	City of over 200,000.	46	59.0	42	52.5	

p – significance level, NS – no statistical significance

The research results described in this paper are based on the analysis of a previously unpublished part of the data collected for a research project entitled "Self-assessment of incidents of stigmatisation and discrimination by medical staff against patients diagnosed with HIV/AIDS and HCV", for the implementation of which permission was obtained from the Bioethics Committee of the Jagiellonian University No. KBET/21/b/2013 issued on 28 February 2013 [64]. The patients from both groups were handed the same questionnaire at both outpatient clinics to allow for full comparison of results in both groups.

The experience of various sensations as a consequence of the relationship with the medical staff was described by asking whether, as a result of the medical staff's behaviour, patients experienced each of the dozen sensations included in the questionnaires, using a 5-point response scale ranging from 1 – not at all, 2 – to a small degree, 3 – to a moderate degree, 4 – to a large degree, to 5 – to a very large degree. The term sensation was used to describe patients' experiencing certain mental states as a consequence of something or reacting to something with a sensory experience. The experience of discrimination was measured by asking whether the patient experienced a denial of medical services after admitting that they were a person living with HCV/HIV. It was assumed that a patient experienced a sense of stigma when he or she indicated one or more of the following situations that he or she had experienced in contact with medical personnel: had a history of not going to see a primary care doctor or specialist despite the onset or worsening of symptoms (HCV/HIV-related or unrelated) or perceived deterioration in health; have given up visiting an outpatient clinic because of fear of the reaction of a doctor or other medical staff member to learning about the infection; have given up visiting an outpatient clinic because of poor treatment in the past by medical staff at a private doctor's practice, in an outpatient clinic, or in a hospital ward, due to HCV/HIV infection, or because medical staff previously made the respondent feel guilty about being infected with HCV/HIV.

Statistical analysis of the data

The results of the study were entered into the IBM SPSS Statistics 21 for Windows database and subjected to statistical tests to check the relationship between the occurrence of the phenomena of discrimination and stigmatisation in the two study groups and their impact on the feelings of the study subjects. A significance level of $p < 0.05$ was adopted. A chi^2 test of independence was used to ascertain the relationship between qualitative variables. The Mann-Whitney test was used to find the relationship between age and time of infection and disease group.

In order to group patients' experiences/feelings, a factor analysis was carried out using the principal components method. An eigenvalue greater than or equal to 1 and the interpretation of the extracted factors were used as criteria for extracting the components. The use of this method made it possible to identify groups of feelings/experiences whose intensity correlated more strongly with the intensity of other feelings from the same group than with the intensity of emotional experiences belonging to any of the other groups. To identify the factors responsible for the variation in the intensity of patients' feelings in their relationships with medical staff, a multivariate linear regression model was used, which was created by adding subsequently particular variables to the model. If the significance of the relationship between the independent variables and the dependent variable was less than 0.1, the variable in question was left in the model analysed in the next step; otherwise, it was removed from the model. The dependent variables in the regression analysis were scales based on the components extracted in the factor analysis.

The following were used as independent variables in the model: occurrence of HIV vs HCV (ref), gender (M = ref), age up to 35 years (ref), from 36 to 50 years, and persons older than 50 years, education: primary, lower secondary and vocational (ref), secondary and tertiary, marital status: single (ref) vs in a relationship (formal or not), place of residence: rural (ref), small and large city, time of infection: up to 3 years (ref), 4 to 10 years, and beyond and also experience of discrimination and feeling of stigmatisation. Interactions of particular independent variables were also tested for the HIV vs HCV group.

Results

The study showed that 27.5% of patients with HIV and 7.5% of patients with HCV ($p = 0.001$), after being told that they had a diagnosis of HIV or HCV, respectively, experienced denial of healthcare services by medical staff. Some patients themselves declined to see a GP or specialist, due to previous unpleasant experiences, despite the onset or worsening of disease symptoms (related or unrelated to HIV/HCV) or a perceived deterioration in health status (25% HIV vs 2.5% HCV, $p < 0.001$). The various reasons for dropping out of visits were analysed, which showed that HIV patients presented them significantly more often than HCV patients, and their detailed distribution is shown in Figure 1.

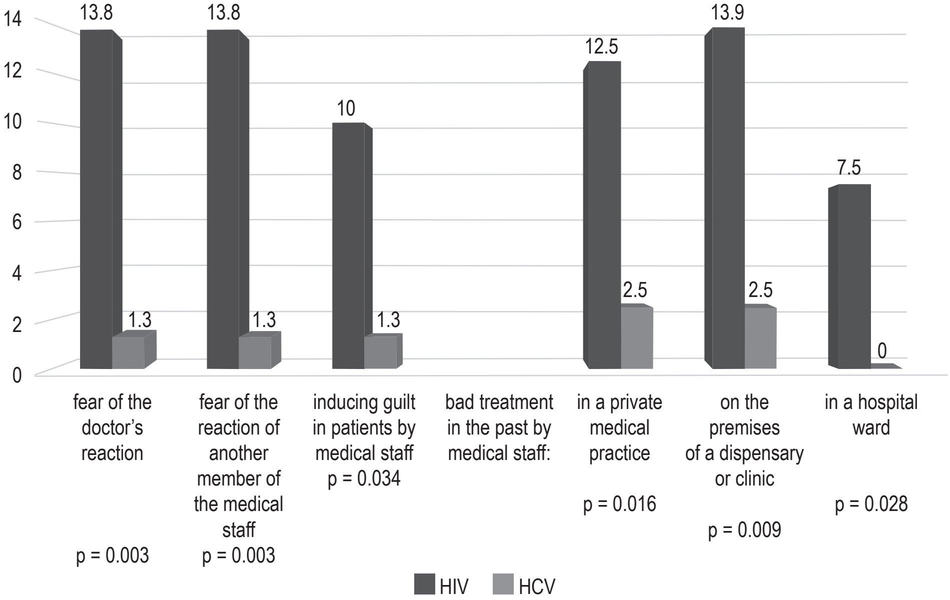

Figure 1. **Reasons for dropping out of clinic appointments**

Patients were asked about the behaviours displayed by medical staff after being informed that the patient was infected with HIV/HCV. The most common staff behaviours indicated by patients were being treated worse than before finding out that they were infected (41.3% HIV vs 11.3% HCV, $p < 0.001$) and showing anxiety due to patients' infection (38.8% HIV vs 13.8% HCV, $p = 0.003$). Patients were slightly less likely to indicate a lack of confidentiality related to the dissemination of information about the virus (33.8% vs 2.5%, $p < 0.001$) and a lack of respect towards the patient (27.5% HIV vs 5.0% HCV, $p < 0.001$).

As a result of the medical staff's behaviour, patients experienced many negative feelings, the prevalence of which in both groups studied is shown in Figure 2, ordered by frequency of occurrence in the group of patients with HIV.

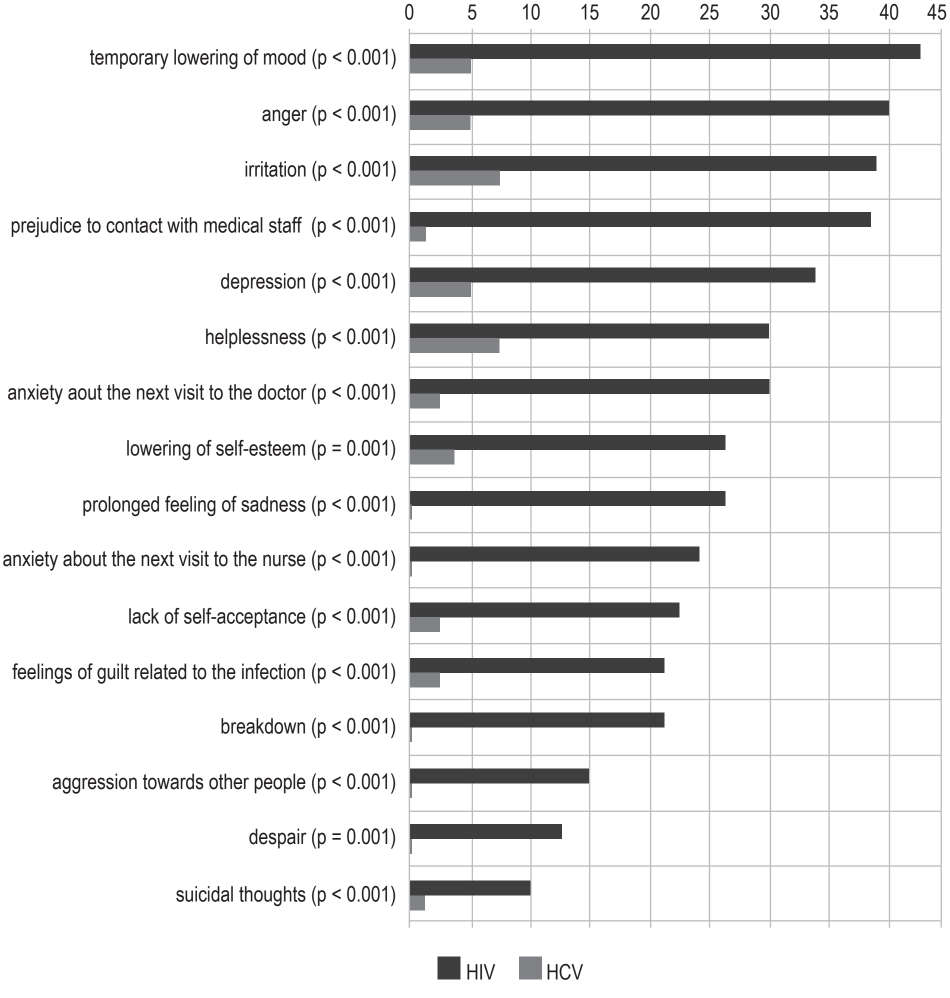

Figure 2. **Feelings experienced as a result of contact with medical staff**

Factor analysis, conducted using the principal components method, on the basis of questions describing feelings experienced in interaction with medical staff, revealed the existence of 3 components with eigenvalues greater than 1, responsible for explaining 74% of the total variance of this set of variables (the individual components, after applying Varimax rotation, explained respectively: 35%, 26% and 13% of the total variance).

An analysis of the meaning of the variables defining the individual components made it possible to define the particular groups of feelings as mild (component 1), extreme (component 2) and strong (component 3).

The mild feelings based on factor analysis included: prejudice against contact with medical staff, temporary mood lows, irritability, fear of the next visit to the doctor, despondency, anger, fear of the next visit to the nurse and prolonged feelings of sadness. The extreme feelings included despair, breakdown, lack of self-acceptance, suicidal thoughts, lowered self-esteem and guilt. The strong feelings, on the other hand, included aggression towards other people and helplessness.

Table 2. **Matrix of factor loadings obtained from principal component analysis describing feelings experienced as a consequence of contact with medical staff**

As a result of the behaviour of medical staff, he/she experienced:	Component		
	1	2	3
Prejudice to contact with medical personnel	0.89		
Temporary lowering of mood	0.80		
Irritation	0.76		
Anxiety about the next visit to the doctor	0.76		
Depression	0.74		
Anger	0.72		
Anxiety about the next visit to the nurse	0.68		
Prolonged feeling of sadness	0.66		
Despair		0.85	
Breakdown		0.78	
Lack of self-acceptance		0.72	
Suicidal thoughts		0.71	
Lowering of self-esteem	0.57	0.67	
Feelings of guilt	0.55	0.66	
Aggression towards other people			0.77
Helplessness			0.69

Factor loadings lower than 0.4 were hidden

Analysis of the linear regression results ($R = 0.693$, $R^2 = 0.480$, $F(7,152) = 20.011$, $p < 0.001$) showed that the severity of mild feelings was associated with factors such as disease type: people with HIV experienced mild feelings more frequently than people with HCV (reference category). The experience of discrimination and stigmatisation resulted in more intense feelings – the experience of discrimination differentiated the degree of the feeling to a greater extent than the experience of stigmatisation. Of the other variables, only the time of infection differentiated the degree to which mild feelings were experienced: those who had been infected for 4 to 10 years experienced these feelings less intensely than those up to 3 years of infection (reference category).

Table 3. **Determinants of the intensity of mild feelings**

Mild feelings	B	p
Group: HIV vs HCV	3.60	<0.001
Experience of discrimination	7.25	<0.001
Experience of stigmatisation	4.17	0.005
Patients aged up to 35 years		
Patients aged from 36 to 50 years	-2.01	0.052
Patients aged 51 years and over	0.06	0.957
Time of infection up to 3 years		
Time of infection 4 to 10 years	-2.68	0.005
Time of infection 11 years and over	-0.31	0.759

According to the linear regression model (R = 0.514, $R^2 = 0.264$, F (7,150) = 7.700, $p < 0.001$), the only factors that influenced the intensity of strong feelings are the experience of discrimination and the interaction between illness and place of residence. Those who had experienced discrimination had strong feelings at a higher intensity than those who had not been discriminated against. Similarly, among those living in large cities, those living with HIV experienced strong feelings in greater intensity than those living with HCV – among those living in villages and small towns, this relationship was not observed.

Table 4. **Determinants of the intensity of strong feelings**

Strong feelings	B	p
Group: HIV vs HCV	0.08	0.793
Experience of discrimination	1.04	<0.001
Gender female vs male (ref)	0.33	0.069
Small town vs countryside (ref)	0.04	0.906
Big city vs countryside (ref)	-0.04	0.876
Group * small town	-0.10	0.843
Group * big city	0.86	0.028

Based on the results of the linear regression model (R = 0.593, $R^2 = 0.351$, F (7,152) = 11.752, $p < 0.001$), the severity of extreme feelings was influenced by factors such as the disease and the experience of discrimination: people with HIV experienced extreme feelings at a much higher intensity than those with HCV, and similarly, the experience of discrimination also resulted in a higher intensity of extreme feelings. Patients over

50 years of age experienced extreme feelings at a higher intensity than those up to 35 years of age (reference category), while those 4 to 10 years post-infection felt extreme feelings less strongly than those up to 3 years post-infection.

Table 5. **Factors determining the intensity of extreme feelings**

Extreme feelings	B	p
Group: HIV vs HCV	1.56	0.005
Experience of discrimination	4.33	<0.001
Patients aged up to 35 years		
Patients aged 36 to 50 years	-0.70	0.253
Patients aged 51 years and over	1.47	0.026
Marital status – in a relationship	-0.87	0.090
Time of infection up to 3 years		
Time of infection 4 to 10 years	-1.30	0.017
Time of infection 11 years and over	-0.57	0.330

Discussion

Stigmatisation and discrimination of patients by various groups – especially by medical personnel – is not only a medical but also a social problem. The manifestation of a negative perception of patients diagnosed with HIV and AIDS causes them to be relegated to the proverbial ghetto, which does not remain without influence on their well-being. The results of individual studies, as well as systematic reviews and meta-analyses, confirm that incidents of stigma and discrimination by medical staff occur in various countries both in Europe, including Poland, and other continents, especially in Africa and Asia, in practically every type of medical units (HIV-related healthcare stigma/discrimination). They occur in both inpatient and outpatient units, including hospital emergency departments, teaching hospitals, single and multi-speciality hospitals, medical and dental practices, as well as primary and specialised care clinics and diagnostic centres [27, 39, 40, 49–51, 53, 59, 60, 65].

Our study in the core group showed a correlation between the nature of the relationship of patients diagnosed with HIV with medical staff and their emotional feelings. Factors that influenced patients' feelings were incidents of stigmatisation and discrimination by staff at the various treatment providers where respondents were treated. Patients' experiences were characterised by an impediment or refusal of health services by some medical professionals after the patient had given them information about HIV infection. In addition, some of the medical staff blamed the patients for the infection, expressed disrespect and verbal aggression towards them and treated them worse than before they found out about the infection.

Similar experiences of HIV patients in contact with healthcare personnel are indicated by studies depicting a sequence of behaviour from stigmatising attitudes transforming into discriminatory practices and behaviours on the part of healthcare professionals. These range from stigmatising behaviours associated with giving ambiguous non-verbal signs, such as avoiding eye contact, harsh or abusive language, irritation and anger, labelling, and blaming for the infection to overt discrimination manifested by the refusal of care or pain relief to cases of physical abuse or even beating the patient [66].

Cases of denial of health services, including hospital admission, to patients with HIV/AIDS, are also confirmed by other studies [67, 68] as well as reports that additionally indicated cases of patients being sent from one hospital to another without testing due to positive serological status [69, 70].

Another noteworthy result obtained in our study concerned the experiences of respondents who, when denied healthcare services because of their seropositive status, indicated a display of anxiety on the part of healthcare workers because of the patient's infection. Anxiety in healthcare workers related to occupational exposure when providing services to patients with HIV/AIDS is also highlighted by the results of other studies [67, 70]. Some researchers underline the role of irrational fear of infection in medical staff as a factor causing stigmatisation related also to the positioning of patients with HIV as so-called "others" who represent socially stigmatised groups of homosexuals, intravenous drug users or sex service workers [71, 72].

Our analyses have shown that the phenomena of stigmatisation and discrimination of patients can result in clinically unfavourable situations detrimental to the patient's health security. The behaviour of medical staff caused some of the patients in this study to abandon visits to the GP or a specialist, despite the onset or intensification of their symptoms or a perceived worsening of their condition due to previous unpleasant experiences. Patients were most likely to drop out of clinic appointments because they feared the reaction of a doctor or other health professional to learning that they were infected, and as the reason for this fear, they indicated previous mistreatment related to HIV.

Direct experiences of stigma and discrimination, or fear of their occurrence on the part of medical staff, resulted in HIV patients avoiding both preventive and curative medical care, which influenced not only delay or postponement in diagnosis and treatment initiation, but also, in some patients, disengagement from HIV treatment and care and, consequently, poorer health outcomes, as some researchers have reportedly suggested [40, 41, 73, 74].

We identified very similar correlations, although to a lesser extent than in patients with HIV, in the comparison group, that is, in patients with HCV by analysing their experiences of, among other things, impediment or refusal of health services in medical units. Similarly to the baseline group, these were manifested in different staff behaviours and affected the emotional state of patients. In this context, many studies have observed cases of stigmatisation and discrimination in the group of HCV-infected patients infected through injecting drug use, manifested by special labelling of hospital rooms where seropositive patients lay, reluctance to perform surgical and dental procedures, accelerated discharge from hospital and open refusal of health services, blood tests or giving pain medication, which was indicated by numerous studies [45, 75-78].

Some studies indicate that one of the factors that influence the level of stigmatisation of patients infected with both HCV and HIV is the phenomenon of the overlapping of an additional stigma factor in the form of co-infection with HIV (stigma layering), the source of which is related to the discrediting of people who inject drugs, are bisexual, and sex service workers or diagnosed with mental disorders [42, 43, 47]. In patients with HCV mono-infection, on the other hand, it was highlighted that stigma was due to their unequivocal identification – based on stereotypical perception – as users of injected drugs [44, 78, 79].

As we mentioned above, incidents of stigma and discrimination occurred against both HIV and HCV patients but there was a significantly higher proportion of HIV patients than HCV patients. Similar correlations were also observed in other publications on stigma and discrimination against people with HIV and HCV, which showed that the status of HCV patients was less stressful due to the perception of this virus as less threatening and therefore causing a feeling of less stigmatisation than for people with HIV as the latter was rated as more deadly. Interestingly, respondents in these studies indicated a social perception of HIV as a moral or social blemish resulting from deviant behaviour but HCV as a physical blemish resulting from the infectious nature of the disease and the different routes of infection [42].

Although fear of stigma and discrimination was observed among HCV patients, the analysis of the results of the study did not show that it was manifested as a withdrawal from medical care, as in the case of patients with HIV. This study confirmed that patients did not reveal their HCV seropositive status for fear of negative consequences [45, 46, 48].

Our research has shown that the attitudes of medical staff towards patients manifested by stigma and discrimination, both in the baseline group – patients with HIV/AIDS and the comparison group – patients with HCV, are not without influence on the patient’s emotional state. On the basis of factor analysis, we divided the feelings accompanying the contact of the surveyed persons with medical personnel into three groups: mild, strong and extreme. The mild feelings included such emotional reactions as prejudice to contact with medical staff, temporary lowering of mood, irritation, fear of the next visit to the doctor, depression, anger, fear of the next visit to the nurse and a long-lasting feeling of sadness. The group of feelings labelled as strong included aggression towards other people and helplessness. The group of extreme feelings included despair, breakdown, lack of self-acceptance, suicidal thoughts, lowered self-esteem and feeling of guilt. The results of our study showed that, from the perspective of emotion determinants, the experience of discrimination differentiated the intensity of all three groups of feelings, the illness and the time of infection two of them – the group of mild and extreme feelings, and in turn, the experience of stigmatisation differentiated the intensity of only mild feelings.

Findings from systematic reviews and meta-analyses of the effects of stigma and discrimination show a significant correlation with the emotional state of people with HIV who have experienced them. The authors of these studies emphasise that incidents of stigma and discrimination can negatively affect mental health in the form of disorders and feelings of anxiety, emotional and psychological distress, depression and suicidal thoughts, and also shame and fear of revealing infection and lower coping skills. One of the elements highlighted in these studies was the association of isolation and lack of social support with the development of clinical symptoms of depression [39, 50]. Findings related to the effects of stigma and discrimination against patients with HCV are similar to those for patients with HIV and included psychological distress, problems with coping with the disease and also lowered self-esteem; however, the latter relationship was more frequently reported by patients with HCV and HIV co-infection [64, 71].

Limitations of the study

The first and most important methodological limitation related to the planning and implementation of this research project was the lack of an unambiguous definition of the concepts of stigmatisation and discrimination, as well as the interchangeable understanding and use of these terms by some researchers studying this issue, which created problems with the operationalisation of variables at the stage of measurement and data analysis.

The second limitation, which was a consequence of the first one, was the lack of scales that would make it possible not only to diagnose but also to unequivocally distinguish cases of stigmatisation from cases of discrimination, as well as to divide them into separate categories related to these specific cases occurring in the health sector. An analysis of the literature showed that while there are stigma scales for HIV patients, it is difficult to apply a single universal discrimination scale. Hence, a self-administered survey questionnaire was used for the study, so that, based on a review of different theories and research approaches on stigma and discrimination, we could create our conceptualisation of these concepts and measure both stigma and discrimination, as well as their impact on patients' emotional state. Similar methodological problems also concerned the unambiguous definition of what emotions are and how they can be categorised or divided, given, on the one hand, the wide spectrum of emotional states and, on the other, many research approaches in this area.

Conclusions

1. Patients experienced pejorative verbal evaluation, impediment or denial of healthcare services by healthcare professionals due to their serological status – diagnosed HIV/AIDS or HCV, and negative experiences were significantly more frequent in patients with HIV compared to those with HCV. Some patients were refusing to visit a healthcare facility because of previous unpleasant experiences with healthcare professionals despite the onset or exacerbation of their disease symptoms or perceived deterioration of their health status.
2. According to the respondents, manifestations of stigmatisation and discrimination by medical staff against patients with HIV/AIDS and HCV were linked to the fear of infection but confirmation of this relationship would require further research. Such attitudes, according to the respondents, had a negative impact on their emotional state.
3. The effect of incidents of stigmatisation and discrimination against HIV and HCV patients in healthcare units is a phenomenon that can be considered on at least several levels: psychiatric, psychological, sociological and public health, so it is reasonable to continue and then compare the results of studies to those obtained in other clinical centres in Poland, in order to know how widespread this problem is and whether it can affect the health-related quality of life of these patients.

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