Associations between perceived discrimination and health status among frequent Emergency Department users

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Objective Frequent Emergency Department (ED) users are vulnerable individuals and discrimination is usually associated with increased vulnerability. The aim of this study was to investigate frequent ED users' perceptions of discrimination and to test whether they were associated with increased vulnerability.

Methods In total, 250 adult frequent ED users were interviewed in Lausanne University Hospital. From a previously published questionnaire, we assessed 15 dichotomous sources of perceived discrimination. Vulnerability was assessed using health status: objective health status (evaluation by a healthcare practitioner including somatic, mental health, behavioral, and social issues – dichotomous variables) and subjective health status [self-evaluation including health-related quality of life (WHOQOL) and quality of life (EUROQOL) – mean-scores]. We computed the prevalence rates of perceived discrimination and tested associations between perceived discrimination and health status (Fischer's exact tests, Mann–Whitney U-tests).

Results A total of 35.2% of the frequent ED users surveyed reported at least one source of perceived discrimination. Objective health status was not significantly related to perceived discrimination. In contrast, experiencing perceived discrimination was associated with worse subjective health status ($P < 0.001$).

Conclusion Frequent ED users are highly likely to report perceived discrimination during ED use, and this was linked to a decrease in their own rating of their health. Hence, discrimination should be taken into account when providing care to such users as it may constitute an additional risk factor for this vulnerable population. Perceived discrimination may also be of concern to professionals seeking to improve practices and provide optimal care to frequent ED users. *European Journal of Emergency Medicine* 00:000–000 Copyright © 2015 Wolters Kluwer Health, Inc. All rights reserved.

Introduction

For more than 30 years, frequent Emergency Department (ED) users, that is, patients who use EDs on multiple occasions, have been a focus of attention in emergency medicine and health policy [1,2]. Frequent ED users are often vulnerable individuals with many risk factors for their health and many health needs [3,4]. Indeed, frequent ED users are more likely to be isolated [5], to have chronic disease [5,6] or mental health issues, to abuse drugs and alcohol [4,5], and to have, in general, a worse health status [5, 7]. However, research is still needed to address their varied needs and to develop optimal care for them [3,8].

Frequent ED users are often considered to be time-consuming, 'illegitimate' users of ED resources by healthcare practitioners and the health system [9,10]. To our knowledge, no study has investigated the association between frequent use of EDs and the perceived discrimination (i.e. the feeling of unjust and unfavorable treatment, such as receiving the same care) that may be associated with this feeling of being 'illegitimate'. Previous studies have, however, shown that perception of discrimination is associated with delays in seeking care, non-adherence to medical treatment, and poorer health status [11,12], and may thus further increase the vulnerability of an already vulnerable population. Vulnerability can be defined as a risk to social, physical, and psychological health and a cause of inequities in healthcare [8,13–15].

This study aimed to consider this under-investigated topic, highlighting the prevalence rate of perceived discrimination among frequent ED users and its associations

with objective and subjective health status (i.e. a healthcare practitioner's evaluation and self-rated evaluation). A broad range of discrimination was considered, not just race-based discrimination, which is often the only form of discrimination examined in hospitals [16,17].

Methods

Participants and recruitment

Data were part of a larger study, a randomized-controlled trial designed to improve frequent users' quality of care [18]. This study was carried out with baseline data. No intervention has occurred and all participants of the randomized-controlled trial were included in this study. The trial was conducted at Lausanne University Hospital, a French-speaking Swiss tertiary care hospital with over 35 000 annual ED visits. The Lausanne University Hospital is one of the five hospitals in Switzerland and a reference in the French-speaking part of Switzerland. It included both somatic and psychiatric care. It is also the regional hospital for the Lausanne area. The Lausanne population includes 42.7% of foreigners and an unemployment rate of 4.3%. Thus, the Lausanne University Hospital develops a high-level clinical university activity and local medical care. Its remit focused on quality of care for patients, high-level training, and research development.

Data were collected between May 2012 and July 2013. The Clinical Research Ethics Committee of the Canton of Vaud approved the study protocol (Protocol No. 32/12).

Eligible participants were patients who were frequent ED users (i.e. if they had visited EDs at least five times during the previous 12 months, a commonly applied arbitrary threshold [19]). Participants were detected by an automated system designed to detect all frequent ED users, and were contacted within 72 h after their visit to EDs. Frequent ED users were eligible for study inclusion if (a) they were at least 18 years old, (b) they were capable of communicating in French, German, Italian, English, or Spanish, or through a community interpreter, (c) they were able to provide informed consent, (d) they were eligible for case management (e.g. not acutely confused, acutely psychotic, suffering from dementia, or intoxicated), (e) they had a projected life expectancy (defined with medical team, e.g. oncologist for patients with end-stage cancer) or a project in Switzerland greater than 18 months, (f) they did not have a family member participating in the study, (g) they were not in prison, and (h) they were not previously in contact with the Vulnerable Population Unit of the Department of Ambulatory Care and Community Medicine (i.e. a think tank that takes care of asylum seekers, homeless people, and all patients at risk of disparities and inequalities in healthcare, and not just frequent ED users). These criteria were in place because the study was part of a larger study including a case management planned over a 12-month period. Therefore, the optimal population included frequent ED users with a life project in Switzerland. A total of 1145 frequent ED users were detected during the period of inclusion. All of them provided a telephone contact (their own telephone number, but also that of family, friends, social worker, and place of accommodation). A total of 928 frequent ED users were contacted (81.0% of the entire population). This procedure was followed because the study team could not contact the entire population. The 928 individuals contacted were selected taking into account the day and the hour of the visit to have a representative sample of ED use. Thus, the inclusion covered the 7/7 days and 24 h/24 h visits of frequent ED users. Frequent ED users were contacted during their visit to the hospital or by phone within 72 h of their departure from the hospital. Of the 1145 frequent ED users, 21.8% agreed to be part of the study, 24.1% declined, 14.9% were unreachable (e.g. wrong phone number, did not answer the telephone, telephone box full), 20.2% fulfilled a criterion of exclusion, and 19.0% were not contacted. In terms of exclusion criteria, 1.3% frequent ED users were not eligible because they were younger than 18 years old, 8.5% were unable to communicate with the study team, 72.8% had a projected life expectancy or project in Switzerland of less than 18 months, 0.3% already had a family member participating in the study, 1.2% were prisoners, and 6.2% were already in contact with the Vulnerable Population Unit team. Among the 250 participants included in the study, 63.6% were included before they left the hospital and 36.4% were included by a telephone call within 72 h after their ED attendance. All interviews were performed face to face; participants who were called by telephone were invited for an interview at Lausanne University Hospital or at their residence.

Measures

Perceived discrimination

We assessed participants' experiences of discrimination exploring a broad range of sources of perceived discrimination: age, language, nationality, disease that is viewed negatively by others, job or activity, religion, physical appearance, physical or mental health, other causes, level of education, marginal lifestyle, income level, skin color, sex, and sexual orientation [20]. We collected answers on a dichotomous scale, coded 1 if a participant had experienced perceived discrimination and 0 otherwise. We created dichotomous grouped sources of perceived discrimination as reported in the study by Hudelson et al. [20]: (i) any discrimination (any of the 15 sources of discrimination), (ii) discrimination related to immigration (nationality, language, religion, or skin color), (iii) discrimination related to age or sex, (iv) discrimination related to physical characteristics/sexual orientation (sexual orientation, disease, handicap, or appearance), and (v) discrimination related to social/

economic position (income, education, job, or lifestyle). Answers were coded 1 if at least one of these sources had been experienced and 0 otherwise.

Objective health status

A healthcare practitioner assessed objective health status using the framework of the WHO [21,22]: (a) somatic issues (i.e. chronic disease, complex medical treatment, somatic polymorbidity, inadequate treatment or drug, pregnancy/neonatal period, or limited mobility/physical disability), (b) mental health issues (i.e. psychiatric polymorbidity, mood, anxiety, psychotic, personality, somatoform, post-traumatic stress, or psychological development disorders, and dementia), (c) behavioral issues (i.e. substance use, sexually risky behaviors, issues related to contraception or abortion, moral/physical interpersonal violence, or at risk/threatening a child), and (d) social issues (i.e. complex/difficult familial situation, social isolation/exclusion, complex/difficult financial situation, inadequate or no housing, inadequate or no insurance, difficulties/absence from work/school/social activities, precarious residence status, or difficulties understanding a commonly spoken language). For each variable, answers were coded 1 if participants had at least one issue and 0 otherwise.

Subjective health status

Participants self-rated their own health status. Quality of life was assessed using the health and quality-of-life subscales of the WHOQOL [23], both coded from 0 to 100, with a higher score indicating a better quality of life/health. Health-related quality of life was measured with the single index value and the health status subscale of the EQ-5D 5 L [24]. The single index value was created according to the recommendations of authors (EQ-5D-5L crosswalk index value calculator), with weights attached to each of the levels of the dimensions of the EQ-5D for European countries (continuous scale from 0 to 1) [25]. Health status ranged from 0 to 100. For both measures, a higher score indicated better health. Thus, subjective health status deals with health-related quality of life and well-being.

Sociodemographic covariates

Participants indicated their age, sex, nationality, level of education, and language spoken.

Sociodemographic and objective health were assessed during face-to-face interviews (questions asked directly by the interviewer according to the questionnaires described below). Perceived discrimination and subjective health were also assessed in face-to-face interviews or using an anonymized written questionnaire at the end of the interview according to the participants' choice.

Data analysis

We first computed descriptive statistics for the sample and prevalence rates of perceived discrimination. We compared the proportions of participants reporting perceived discrimination across subgroups (sociodemographic covariates) using Fisher's exact tests and Pearson χ^2-test.

Then, we investigated the relationships between perceived discrimination and health status using Fisher's exact tests (objective health status) and Mann–Whitney tests for nonparametric data (subjective health status). All analyses were carried out using SPSS, version 21 (SPSS Inc., Chicago, Illinois, USA).

Results

The sample's characteristics are shown in Table 1. Participants were on average 46.2 ± 18.9 years of age and 57% were men. Almost half were Swiss and the majority spoke French without difficulty. In total, 12% of the frequent ED users surveyed were asylum seekers or undocumented migrants. A low proportion (17%) had been to university or undergraduate college.

A majority of frequent ED users had social issues, somatic issues, or mental health issues, whereas a third had behavioral issues.

Table 1 Respondents' characteristics and vulnerability

	N (%)/mean (SD)
Sociodemographic characteristics	
Sex[a]	
Male	143 (57.2)
Female	107 (42.8)
Age[b]	46.2 (18.90)
Country of origin (1 missing)[a]	
Switzerland	119 (47.8)
Other European country	44 (17.7)
Non-European country	86 (34.5)
Language[a]	
French without difficulty	203 (81.2)
French with difficulty or other language	47 (18.8)
Level of education[a]	
Obligatory schooling	64 (25.6)
High school, vocational school	113 (45.2)
University, undergraduate college	42 (16.8)
Nonapplicable, no response	31 (12.4)
Objective health status	
Somatic issues[a]	
No	77 (30.8)
Yes	173 (69.2)
Mental health issues[a]	
No	124 (49.6)
Yes	126 (50.4)
Behavioral issues[a]	
No	170 (68.0)
Yes	80 (32.0)
Social issues[a]	
No	68 (27.2)
Yes	182 (72.8)
Subjective health status	
EQ-5D single index value (0–1) (4 missing)[b]	0.8 (0.1)
EQ-5D health status (0–100) (2 missing)[b]	50.9 (24.1)
WHOQOL Quality of life (0–100) (1 missing)[b]	46.0 (30.5)
WHOQOL Health (0–100) (2 missing)[b]	35.5 (28.7)

[a]N and % are given.
[b]Mean and SD are given.

Prevalence rates of perceived discrimination

A total of 35% of participants reported at least one source of perceived discrimination (Table 2). The most frequently quoted sources of perceived discrimination were disease, physical appearance, nationality, and language. At the other end of the scale, sexual orientation, skin color, and sex were the least frequently quoted sources of discrimination. Grouped sources of perceived discriminations showed that perceived discrimination related to physical characteristics/sexual orientation (21%), social/economic position (16%), and immigration (16%) was more prevalent than perceived discrimination related to age and sex (7%).

Sociodemographic covariates were not significantly related to perceived discrimination, except level of education (Table 3). Participants who did not answer (nonresponse, not applicable) for level of education tended to report more sources of discrimination, whereas the highest level of education (university, undergraduate college) was associated with fewer sources of discrimination. Participants who reported perceived discrimination were younger than participants who did not ($P = 0.006$).

Associations between perceived discrimination and health status

Objective health status was not significantly related to perceived discrimination. Indeed, perceived discrimination was not higher among participants with somatic, mental health, behavioral, or social issues ($P > 0.05$). In contrast, perceiving discrimination was associated with worse subjective health status (Table 3). Participants who reported perceived discrimination had a lower health status (EQ-5D health status, $P < 0.001$), a lower quality of

Table 2 Sources of perceived discrimination reported by frequent ED users

Discrimination	N (%)
Age	15 (6.0)
Language	25 (10.0)
Nationality	26 (10.4)
Disease that is viewed negatively by others	35 (14.0)
Job or activity	13 (5.2)
Religion	12 (4.8)
Physical appearance	29 (11.6)
Physical or mental handicap	17 (6.8)
Other causes	23 (9.2)
Level of education	12 (4.8)
Marginal lifestyle	22 (8.8)
Income level	18 (7.2)
Skin color	7 (2.8)
Sex	8 (3.2)
Sexual orientation	4 (1.6)
Discrimination related to immigration[a]	40 (16.0)
Discrimination related to age or sex	17 (6.8)
Discrimination related to physical characteristics/sexual orientation[b]	52 (20.8)
Discrimination related to social/economic position[c]	40 (16.0)
All discriminations	88 (35.2)

ED, Emergency Department.
[a]Nationality, language, religion, or skin color.
[b]Sexual orientation, disease, handicap, or appearance.
[c]Income, education, job, or lifestyle.

Table 3 Respondent characteristics associated with the report of at least one cause of discrimination

	No discrimination reported	Discrimination reported	P-value[c]
Sociodemographic characteristics			
Sex [n (%)]			
Male	92 (64.3)	51 (35.7)	0.894
Female	70 (65.4)	37 (34.6)	
Age [mean (SD)]	48.81 (20.00)	41.25 (15.75)	0.006
Country of origin (1 missing) [n (%)]			
Switzerland	80 (67.2)	39 (32.8)	0.555
Other European country	27 (61.4)	17 (38.6)	
Non-European country	55 (64.0)	31 (36.0)	
Language [n (%)]			
French without difficulty	137 (67.5)	66 (32.5)	0.089
French with difficulty or other language	25 (53.2)	22 (46.8)	
Level of education [n (%)]			
Obligatory schooling	46 (71.9)[a]	18 (28.1)[a]	0.022
High school, vocational school	68 (60.2)[a]	45 (39.8)[a]	
University, undergraduate college	33 (78.6)[a]	9 (21.4)[b]	
Nonapplicable, no response	15 (48.4)[a]	16 (51.6)[b]	
Objective health status [n (%)]			
Somatic issues	111 (64.2)	62 (35.8)	0.776
Mental health issues	80 (63.5)	46 (36.5)	0.693
Behavioral issues	51 (63.8)	29 (36.3)	0.887
Social issues	112 (61.5)	70 (38.5)	0.101
Subjective health status [mean (SD)]			
EQ-5D single index value (0–1) (4 missing)	0.8 (0.1)	0.8 (0.1)	0.331
EQ-5D health status (0–100) (2 missing)	54.3 (24.0)	44.5 (23.1)	<0.001
WHOQOL Quality of life (0–100) (1 missing)	51.1 (31.7)	36.7 (26.0)	<0.001
WHOQOL Health (0–100) (2 missing)	39.4 (28.2)	28.2 (28.2)	0.001

[a,b]For significant Fischer's exact test or Pearson χ^2, a same subscript letter within a column indicates that proportions did not differ; two different subscript letters indicate that proportions differed at the 0.05 level.
[c]Nationality, level of education – Pearson χ^2; objective health status, sex, language – Fischer's exact test; subjective health status – Mann–Whitney U-test.

life (WHOQOL quality of life, $P < 0.001$), and worse health (WHOQOL health, $P = 0.001$). Health-related quality of life measured using the EQ-5D single index value was not significantly different for participants who reported and who did not report perceived discrimination ($P = 0.331$).

Discussion

Perception of discrimination was very likely to occur among frequent ED users. Over a third of the participants experienced at least one source of perceived discrimination during their visits to hospital.

Few participants reported perceived discrimination related to sexual orientation, skin color, or sex. In contrast, the most common sources of perceived discrimination were related to language, nationality, disease, or physical appearance. These frequent sources of perceived discrimination showed that discrimination outside the USA may be not just race based, although that is the most studied source of discrimination [16,17]. The study

provided results for only 250 frequent ED users, but the common sources of perceived discrimination were almost the same for frequent ED users and Swiss French-speaking hospitalized patients [20] – even if prevalence rates were higher for frequent ED users – suggesting that this phenomenon was not related to frequent ED users only, but may be more general in the Swiss context.

Frequent ED users who perceived discrimination were more likely to have lower self-ratings of health status. Indeed, frequent ED users who reported at least one source of perceived discrimination reported poorer health and a lower quality of life. This result is in line with the conclusions of previous studies that report increased vulnerability associated with perceived discrimination [20]. In contrast, we found no difference in objective health status including somatic, mental health, behavioral, and social issues. Experiencing perceived discrimination was not related to an objective measure of health status, but to the self-evaluation of health status. Perceived discrimination seemed to be associated with a negative overall picture of health among frequent ED users, even if their health was not really worse.

Frequent ED users are described as vulnerable patients [3,4], and perceived discrimination appeared as an additional risk factor for this population. A common path describes how perceived discrimination produces vulnerability. For example, previous studies described racial perceived discrimination as a stressor enhancing disparities in health [11,17]. Indeed, perceiving discrimination in healthcare is associated with downstream consequences, including psychological and physiological effects [12]. The present study showed only psychological correlates (i.e. subjective health evaluation) and not physiological correlates (i.e. objective health status) of perceived discrimination. An explanation may be that more time is needed to observe perceived discrimination effect on objective health status.

This study had some limitations. The first was the cross-sectional design of the study, which did not enable the testing of causal relationships between perceived discrimination and health status. However, follow-up data will be collected at the end of the study; thus, longitudinal comparisons will be possible, even if longitudinal studies are difficult to carry out among such a population. Another limitation was that we measured perceived discrimination, and patients' perceptions may differ from what really happened [20]. A third shortcoming was that a non-negligible part of the population was unreachable (14.9%). Contacting vulnerable individuals is often an issue and the study may have missed the most vulnerable frequent ED users. However, the face-to-face inclusion and the fact that all frequent ED users provided a telephone contact reduced this issue. A fourth limitation was that the study excluded participants without a projected life expectancy and a project in Switzerland greater than

18 months. This criterion may have excluded some important patients, such as some terminal cancer patients who may be likely to share perceived discrimination. Fortunately, this issue concerned only a small proportion of eligible participants (2.8%). Further investigations without these exclusion criteria are needed. Another shortcoming was that face-to-face procedures could have induced bias, such as participants' unwillingness to provide honest answers. For example, participants may have been reluctant to report perceived discrimination to the hospital's team. Another limitation was that the study was carried out on a single site; thus, generalization to other settings should be performed with caution. A last shortcoming dealt with the sample studied. First, the study focused on frequent ED users without including a control group of regular ED users, and therefore, studies investigating perceived discrimination among regular ED users are needed. Second, a subsample of frequent ED users may have been excluded (e.g. end-of-life, highly vulnerable individuals). Thus, results should be interpreted with caution.

To conclude, to our knowledge, this is the first study examining perceived discrimination among frequent ED users and its association with objective and subjective health status. Frequent ED users are highly likely to report perceived discrimination during ED use, and this was linked to a decrease in their own rating of their health. Hence, discrimination should be taken into account when providing care to such users as it may constitute an additional risk factor for this vulnerable population. Healthcare practitioners should be aware of this phenomenon and perceived discrimination may also be of concern to professionals seeking to improve practices and provide optimal care to frequent ED users.

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Conflicts of interest
There are no conflicts of interest.

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