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**AIDSImpact/SEISIDA Special Issue, Evolution of HIV-related stigma in Spain
between 2008 and 2012**

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Abstract

Objective: To analyze the temporal evolution of HIV-related stigma in Spain between 2008 and 2012.

Method: We interviewed a representative sample of the Spanish population ($N = 1619$) through computer-assisted telephone interviews. The survey measures diverse facets of stigma and other related variables. We compared the data of the 2012 survey with the result of the survey carried out in 2008.

Results: The degree of discomfort concerning people with HIV decreased significantly in 2012. Avoidance intention, negative feelings, the number of people who agreed with the implementation of harsh discriminatory policies, and the number of people who blame people with HIV, were also lower in 2012. However, there are still misconceptions about HIV transmission.

Conclusions: Attitudes of the Spanish population toward people with HIV have improved in the last four years. However, some attitudes and beliefs still need to be changed.

Keywords: HIV stigma, temporal evolution, population survey.

Introduction

The importance of HIV-related stigmatization has been extensively documented since the initial moment of the onset of the disease (see, for example, Herek, 1999, or Parker & Aggleton, 2003, among many others).

In Spain, a study conducted with a representative sample of the population in 2008 (Fuster, Molero, Gil de Montes, Vitoria, & Agirrezabal, 2013) revealed the existence of attitudes of rejection and discrimination towards people with HIV that were expressed in different ways.

Why are people with HIV so stigmatized? The literature shows that HIV-related stigma is associated with the perception of threat implied by the infection. On the one hand, it is perceived as a tangible threat to health. This occurs because of its perceived severity and also because there are misconceptions about the pathways of transmission. ([Cao et al., 2010](#); [Fuster et al., 2013](#); [Sullivan et al., 2010](#)). On the other hand, HIV has been perceived as a threat to traditional values and ideology. Therefore, since the beginning of the epidemic, people have tried to blame certain groups of people who symbolized the transgression of these values. Blaming people with HIV is one of the variables that is strongly associated with HIV-related stigma ([Cao et al., 2010](#); [Decety, Echols, & Correl, 2010](#); [Fuster et al., 2013](#); [Sullivan et al., 2010](#)).

Numerous studies show that HIV-related stigma has an important impact on the well-being of people with HIV ([Franke et al., 2010](#); [Steward et al., 2011](#)) and on public health ([Young & Bendavid, 2010](#)). For this reason, it would be very useful to perform studies analyzing the evolution of HIV-related stigma over time. However, to our knowledge, few countries have performed this type of studies. The goal of the present study is to analyze the temporal evolution of the attitudes and beliefs towards people with HIV in Spain during the 2008-2012 period.

Methods

Participants

For both surveys (2008 and 2012), the sampling frame was the population older than 16 years living in Spain. The final valid sample was therefore made up of 1607 people in 2008 (Fuster et al., 2013), and 1619 in 2012. These samples, representatives of the Spanish population, provided a margin of error of 2.43 % for a 95.5% confidence level (CI) in a scenario of maximum dispersion. The characteristics of the sample are presented in Table 1.

Insert Table 1 about here

Instrument

The survey used in this investigation was basically the same as that used in the 2008 survey ([Fuster et al., 2013](#)).

The questionnaire measures the following facets of stigma: (a) the *degree of discomfort with and avoidance of people with HIV*; (b) *advocacy of discriminatory policies*; (c) *negative feelings towards people with HIV*; (d) *degree of desired relationship with a person with HIV*. Secondly, the survey included the following variables associated with HIV-related stigma: (a) *the degree of perceived severity of AIDS*; (b) *beliefs about the transmission of HIV through social contact*. For most items, the exact wording is reproduced in Tables 2 and 3. (A detailed description of the variables can be consulted in [Fuster et al., 2013](#)).

Design and Procedure

We used a cross-sectional survey design. The data were collected in May of 2012. The sample design was randomized, with quotas of sex and age. We performed computer-assisted telephone interviews (CATI). We had to make 14.701 telephone contacts for the 1698 interviews performed. Out of the total of people whom we contacted, 36%

refused to be interviewed, 31% did not meet the profile, and in 8.5%, the call was cut off. Mean interview duration was 12 minutes.

The methodological procedures followed in both surveys (2008 and 2012) were similar (Fuster et al., 2013).

Data Analysis

To analyze the tendency in attitudes, we compared the proportions and the means, and analyzed the unweighted percentages. We also determined the effect size of the differences (Odds Ratio and Cohen's *d* for frequencies and means, respectively).

Results

Evolution of populational prejudice towards people with HIV

Discomfort and avoidance

The results of the 2012 survey showed that the degree of discomfort felt in the presence of people with HIV had decreased significantly in the three proposed scenarios (school, work, store). The item referring to the hypothetical situation of sending one's child to a school where the greatest decrease was observed

Similarly, the intention of avoiding these three situations decreased in 2012. Shopping at a store that employs a person with HIV was the most frequently avoided scenario in both surveys and where the greatest reduction (33%) in the probability of avoidance was observed (Table 2).

Advocacy of discriminatory AIDS-related policies

A significant decrease was observed in the percentage of people who advocate discriminatory policies in 2012 survey. The reduction was greater in the probability of agreeing with segregation policies of people with HIV than in the agreeing with publishing their names (40 and 32%, respectively) (Table 2).

Negative feelings towards people with HIV

We observed that negative feelings towards people with HIV had also decreased since 2008, although the size of the differences was low. The most frequently expressed feeling was still pity, and the effect size of the difference was also the lowest (Table 3).

Type of desired relationship with a person with HIV

In 2012, there was a higher percentage of people who would be friends and have a long-term partner relationship with people with HIV (Table 2).

Evolution of variables associated with HIV-related stigma

Perceived severity of the disease and misconceptions about HIV transmission

We observed that the perceived severity of AIDS remained fairly high ($M = 8.9$, $SD = 1.4$), although somewhat lower than in 2008 ($M = 9.2$, $SD = 1.4$) ($p < .0001$ by Mann-Whitney U test). The effect size of this difference was medium-low, $t(3218)$, 95% IC [0.20, 0.39], Cohen's $d = 0.21$.

We found that the misconceptions about HIV transmission remained stable over time. Only a slight, but significant, decrease was found in the percentage of people stating that HIV can be transmitted by sharing public bathrooms (Table 2).

Responsibility and Blame

We also observed a decrease in the percentage of interviewees who blamed people with HIV for their infection (Table 2). However, no significant differences were observed in the percentage or probability of those who considered that people who had contacted HIV through sex or drugs get what they deserved.

Insert Table 2 about here

Insert Table 3 about here

Discussion

The attitudes and beliefs of the Spanish population towards people with HIV have shown a positive evolution since the survey carried out in 2008. We observed that diverse expressions of stigma measured decreased over the period studied

In spite of this improvement, the percentages of discomfort that are still expressed by the population in the presence of a person with HIV are concerning. Although opinions and attitudes do not necessarily translate into specific behaviors, the potential for discrimination is still very high and, at times, can spill over into daily life (Herek, Capitanio, & Widaman, 2002).

The results also showed various aspects in which the passing of time had not produced any improvement. In general, the erroneous beliefs about the possibility of transmission of HIV through contact social are maintained. Moreover, the amount of people who blame people with HIV when the origin of the infection (how they caught the virus) becomes salient was constant. The literature indicates that the controllability of stigma is one of the dimensions with the most impact on the amount of rejection expressed (Decety et al., 2010). This, together with the feelings of fear produced by the belief about easy transmission of HIV through social contact, could cause the probability of expressions of stigma to rise in the future. This is because previous studies (Cao et al., 2010; Fuster et al., 2013; Sullivan et al., 2010) show that these variables in which no positive evolution was found are related to the existence of stigma.

An important conclusion of this study is that some aspects of stigma decreased in Spain across a four-year period. Although, with the data of this research, it is not possible to establish causal relations, a plausible explanation of this positive change could lie in the influence of the policies specifically aimed at reducing HIV-related stigma (Ministry of Health, Social Policy, and Equality, 2008).

This study presents some limitations related to the design because it is a cross-sectional survey that does not allow us to analyze the causes of the observed reduction in stigma. Future studies should examine in greater depth the influence of the interventions carried out by the diverse actors to reduce stigma.

Likewise, survey designs always have a high percentage of people who do not respond. Although in the present study, the no-response rate was within the normal range for this type of studies, this may have repercussions, in the sense that some sociodemographic characteristics of the surveyed people differ from those of the general population ([Fuster et al., 2013](#)).

However, despite its possible limitations, our study reveals the usefulness of applying surveys periodically to assess the evolution of populational attitudes over time.

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Conflict of interest

The authors declare they have no conflict of interest.

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Table 1. Demographic characteristics of the sample

Gender	
Male	49.1
Female	50.9
Age, years, mean \pm SD	45.33 \pm 16.72
Educational level	
No studies	4.4
Elementary school	33.1
High school	32.6
University degree	33.4
Nationality	
Spanish	92.7
Other European country	2.3
North American	.2
Latin American	3.9
African	.4
Inhabitants	
Less than 20.000	31.2
Between 20.001 and 50.000	15.2
Between 50.001 and 200.000	22.1
Between 200.001 and 500.000	14.8
More than 500.000	16.7
Occupation	
Businessman	2
Farmer	.6
Liberal profession /self-employed	5.7
Managers and senior staff	2
Technicians and specialists	16.8
State-employed civil servants	6.7
Labourers and junior employees	2.1
Unemployed	17
Retired	17.7
Remaining occupations	6.1
Home keeper	11.2
Students	8.1
Other	4

Data in percentages unless otherwise stated

Table 2. Facets of stigma and related variables measured in the survey

	% [95% CI]		Z	OR [†] [95% CI]
	2008	2012		
Degree of discomfort concerning a person with HIV^a				
A classmate at your child's school has HIV	58.8 [0.56, 0.61]	49.2 [0.46, 0.51]	5.42***	0.68 [0.59, 0.78]
A coworker of yours has HIV	30.8 [0.28, 0.33]	25.8 [0.23, 0.27]	3.10**	0.78 [0.67, 0.91]
An employee at the store where you shop has HIV	44.5 [0.42, 0.46]	38.7 [0.36, 0.41]	3.28**	0.79 [0.68, 0.91]
Avoidance of contact with a person with HIV^b				
School classmate	41.6 [0.38, 0.44]	34.5 [0.31, 0.37]	2.95*	0.74 [0.61, 0.90]
Coworker	31.6 [0.27, 0.35]	23.7 [0.19, 0.27]	2.57*	0.67 [0.50, 0.91]
Shop employee	55.7 [0.52, 0.59]	49.1 [0.45, 0.53]	2.32*	0.74 [0.60, 0.92]
Advocacy of discriminatory policies^c				
Publication of the names of people with HIV	18.1 [0.16, 0.20]	12.9 [0.11, 0.14]	3.94***	0.68 [0.56, 0.82]
Separation of people with HIV to protect public health	20 [0.18, 0.22]	13.1 [0.11, 0.14]	5.21***	0.60 [0.50, 0.73]
Type of desired relationship with a person with HIV				
Neighbor	11.8 [10.2, 13.4]	6.4 [5.2, 7.6]	5.28***	0.51 [0.40, 0.66]
Classmate or Coworker	6.9 [5.7, 8.1]	3.6 [2.7, 4.5]	4.06***	0.51 [0.37, 0.70]
Friend	42.2 [39.8, 44.6]	58.6 [56.2, 61]	9.25***	1.94 [1.68, 2.23]
Sporadic sexual partner	4.8 [3.8, 5.8]	1.4 [0.8, 2]	5.55***	0.27 [0.17, 0.44]
Long-term partner	6.5 [5.3, 7.7]	18 [16.1, 19.9]	9.95***	3.18 [2.51, 4.03]
None	18.8 [16.9, 20.7]	8.2 [6.9, 9.5]	8.74***	0.39 [0.31, 0.48]
Beliefs about the transmission of HIV^d				
Sharing a glass with a person with HIV	15.1 [13.3, 16.9]	13.9 [12.2, 15.6]	NS	0.91 [0.75, 1.10]
Using public toilets	17.3 [15.5, 19.1]	13.9 [12.2, 15.6]	2.61*	0.77 [0.64, 0.93]
If a person with HIV coughs or sneezes nearby	14.9 [13.2, 16.6]	14.9 [13.2, 16.6]	NS	1.00 [0.82, 1.22]
Attributions of responsibility and blame to people with HIV^e				
People with HIV are to blame for contracting the disease	19.3 [17.4, 21.2]	15.2 [13.5, 16.9]	3.03*	0.75 [0.62, 0.90]
People with HIV who contracted the virus through sex or drugs get what they deserve	17 [15.2, 18.8]	16.2 [14.4, 18]	NS	0.94 [0.78, 1.14]

Note. Items have a 4-point response range. The percentages are based on the totals and include the option *don't know/ doesn't answer*. CI = Confidence interval

^a Percentage of people who feel between *somewhat* and *very uncomfortable* in this situation. ^b Percentage of people who feel between *somewhat* and *very uncomfortable* who would avoid contact with HIV-infected people in these situations. ^c Percentage of people who state that they *agree pretty much* or they *strongly agree*. ^d Percentage of respondents incorrectly believing that each type of activity is *very* or *somewhat likely*. ^e Percentage that *agrees pretty much* or *"strongly agrees*.

* p < .05, ** p < .01, *** p < .001

† OR of 2012 year compared with 2008 for a positive answer regarding to: discomfort and avoidance, advocacy of discriminatory policies, desired relationship with a person with HIV, beliefs about HIV transmission, and responsibility and blame to people with HIV. Confidence Intervals (CI) calculated by Cornfield method

Table 3. Negative feelings towards people with HIV

	$M \pm SD$		$t(df)$	95% IC	Cohen's d	p^1
	2008	2012				
Fear	4 ± 3.5	3.1 ± 3.4	7.37(3196)	[0.66, 1.13]	0.26	.000
Anger	2.8 ± 3.4	1.9 ± 2.9	8.02(3088)	[0.68, 1.12]	0.28	.000
Disgust	2.1 ± 3	1.4 ± 2.5	7.15 (3081)	[0.50, 0.89]	0.25	.000
Pity	6.8 ± 3.1	6.3 ± 3.3	4.42 (3202)	[0.27, 0.72]	0.15	.002

The scales have a 10-point response range.

All t -values were significant at $p < .0001$.

¹ p values by Mann-Whitney U test.