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Attitudes towards Alcohol Dependence and Affected Individuals: Persistence of Negative Stereotypes and Illness Beliefs between 1990 and 2011

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Key Words
Attitudes · Alcohol dependence · Stereotypes · Time trend study

Abstract
Background: Alcohol dependence is among the most severely stigmatized mental disorders. We examine whether negative stereotypes and illness beliefs related to alcohol dependence have changed between 1990 and 2011. ***Methods:*** We used data from two population surveys with identical methodology that were conducted among German citizens aged ≥18 years, living in the 'old' German states. They were conducted in 1990 and 2011, respectively. In random subsamples (1990: n = 1,022, and 2011: n = 1,167), identical questions elicited agreement with statements regarding alcohol dependence, particularly with regard to the illness definition of alcohol dependence and blame. ***Results:*** Overall, agreement with negative stereotypes did not change in the course of 2 decades. About 55% of the respondents agreed that alcohol dependence is an illness like any other, >40% stated that it was a weakness of character and 30% endorsed that those affected are themselves to blame for their problems. ***Conclusions:*** It is apparent that promoting an illness concept of alcohol dependence has not been an easy solution to the problem of stigma. We discuss how the normative functions of alcohol dependence stigma might have prevented a reduction of negative stereotypes.

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Introduction

Reactions from the social environment play a crucial role in motivating change and the progress of treatment in substance abuse disorders [1, 2]. Along with other such disorders, alcohol dependence is more severely stigmatized than mental disorders that are not related to substance abuse [3]. It has been identified that stigma is an important barrier to help-seeking and recovery from alcohol dependence. Among people with drinking problems, the anticipation and experience of stigma are particularly common obstacles to seeking help [4]. Self-stigma, i.e. the internalization of negative stereotypes about people who are alcohol-dependent, diminishes self-esteem and drinking-refusal self-efficacy irrespective of the

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severity of an individual's drinking problem [5, 6], and it is associated with a lower quality of life [7]. Although substance abuse stigma clearly has a normative component [8, 9] in delineating the boundaries of socially acceptable behavior, its negative effects on those affected contradict the 'preventive' or 'curative' purpose of the stigma. Instead of facilitating change, stigma can aggravate the problem rather than solve it [10].

Regarding its normative purpose, there is evidence that the quality of the stigma of alcohol dependence differs from that of other common mental disorders like depression or schizophrenia. Unlike these disorders, alcohol dependence is less frequently regarded as an illness, and sufferers are blamed far more for their problem [11]. It was thus expected that promoting an 'illness' concept of alcohol dependence would help to reduce this blame and consequently the stigma attached to this disorder [12].

When the WHO defined alcohol dependence as an illness in the 1950s [13], this was an important step towards a generally accepted illness model. However, population surveys conducted in the USA and Europe since then have demonstrated that the illness concept of alcohol dependence has only partially permeated public opinion (see [14–20] for examples). Furthermore, defining alcohol dependence as an illness does not prevent blaming the affected individual. In fact, both views, i.e. seeing alcohol dependence as an illness and blaming those affected for it, have been stated simultaneously by many respondents [14, 16–18, 20, 21]. Although findings from previous studies are quite consistent, exact numbers are difficult to compare because the different types of study populations and survey methodologies have led to a wide range of results. In a recent systematic review, for example, numbers with regard to endorsing an illness concept of alcohol dependence were 38–91% [3]. This divergence across studies makes it impossible to judge how attitudes have developed over time. Ideally, the illness concept of alcohol dependence should have gained popularity, and the concept of blame should have diminished. Time trend studies require at least two surveys, conducted at different time points, but in the same population with identical methodology. So far, only two studies have examined time trends in attitudes regarding alcohol dependence in this manner. In the UK, 60% of respondents in a national survey in 1998 stated that people with alcohol dependence 'have only themselves to blame' for their condition [22] and 5 years later, this proportion was unchanged [23]. A study from the USA found that the proportion of respondents seeing alcohol dependence as resulting from 'bad character' in 2006 had increased by 16% since 1996 [24]. Using data from two methodologically identical population surveys conducted in 1990 and 2011, we examine here how agreement with several statements regarding the illness character of alcohol dependence and blame towards those affected has developed in Germany over 21 years.

Table 1. Sociodemographic characteristics of study samples

	Survey 1990 (n = 1,022)	Total population 1990[a]	Survey 2011 (n = 1,167)	Total population 2010[a]
Gender				
Men	47.2	48.5	45.6	48.6
Women	52.8	51.5	54.4	51.4
Age, years				
18–25	14.9	12.3	8.6	11.3
26–45	36.8	38.0	32.5	31.9
46–60	25.9	24.2	28.4	26.9
>61	22.4	25.5	30.5	29.9
Education[b]				
Unknown	1.6	0.4	0.6	1.0
Not completed	2.3	2.5	3.4	4.0
Years of school				
8/9	52.1	55.8	39.4	38.5
10	29.2	25.8	40.5	29.3
12/13	14.8	15.5	16.2	27.1

Values are percentages.
[a] Data from the Federal Statistical Office of Germany.
[b] Data only available for people ≥20 years of age (not for younger people).

Methods

Surveys

Two population surveys were conducted among German citizens aged ≥18 years living in the 'old' German states. The first was conducted in 1990 (n = 3,067, response rate 70.0 %) and the second in 2011 (n = 2,416, response rate 64.0 %). In both surveys, samples were drawn using a random sampling procedure with 3 stages: (1) sample points, (2) households, and (3) individuals within target households. Target households within sample points were determined according to the random-route procedure. Target individuals were selected using random digits. Informed consent was considered to have been given when individuals agreed to complete the interview. For the first survey, the fieldwork was carried out by GETAS in Hamburg, and for the second by USUMA in Berlin; both these institutes specialize in social and market research. Before the first survey, the interview had been pretested with 20 people to ensure maximum understandability of the questions.

Table 2. Pairwise correlation (Pearson's R) of alcohol-related stereotypes elicited in the surveys 1990 and 2011

Item	1	2	3	4	5	6
(1) Alcoholism results from weakness of character	1					
(2) Alcoholics are themselves to blame for their bad fate	0.54**	1				
(3) With more discipline, alcoholics could control their drinking and drink normally	0.35**	0.35**	1			
(4) An alcoholic cannot stop drinking without therapeutic help	0.01	–0.01	–0.18**	1		
(5) Alcoholism is almost always resulting from psychological problems	–0.03	–0.12**	–0.10**	0.19**	1	
(6) Alcoholism is an illness like any other	–0.24**	–0.22**	–0.14**	0.16**	0.11**	1
(7) Drinking very large amounts of alcohol is an acceptable life habit	0.06*	0.13**	0.24**	–0.22**	–0.12**	0.04

* $p < 0.01$; ** $p < 0.001$.

Interview

The same interview mode (face-to-face and paper-pencil) was used for both surveys and the wording and sequence of questions were identical. In the first part (not the subject of this study), questions relating to a case-vignette of a person with schizophrenia, depression or alcohol dependence were asked. A comparative analysis of public attitudes towards people suffering from these disorders in 1990 and 2011 has been published elsewhere [25]. The second part covered issues unrelated to the case-vignette. The subsamples of respondents who had answered questions related to the alcohol dependence vignette (1990: n = 1,022, and 2011: n = 1,167) were then asked questions on common stereotypes about alcohol dependence and alcohol-dependent individuals relevant to this paper. Sociodemographic data on these subsamples is given in table 1. Both samples were broadly representative of the general population, with one exception: in 2011, the proportion of respondents who had received a higher education was smaller than in the general population of that year.

Items were adopted from a regional survey in the city of Saarbrücken in 1981 [26], changing the original Yes/No answer format to Likert-type answer scales. Respondents had to rate their agreement with each statement on a 5-point Likert scale with the anchors 1 'agree completely' and 5 'do not agree at all'. Prior to the survey in 1990, a pretest with 20 respondents was carried out to ensure comprehensibility of the items. The exact wording of the items is supplied in table 2. The items do not elicit knowledge about alcohol dependence, but rather agreement/disagreement with stereotypical beliefs. Since the survey in 1990 used the term 'alcoholism', we chose to similarly use this term in the 2011 survey to keep the items identical. In this paper, we speak of 'alcohol dependence' and only use 'alcoholism' when citing the wording of our items. Other variables used for our analyses included the age, gender and educational attainment of the respondents.

Statistical Analysis

We conducted principal component factor analysis with varimax rotation to explore a potential factor structure of the items, resulting in 3 factors with an eigenvalue >1 (table 2). Some items did load on more than 1 factor, indicating the ambiguity of the respective items. The Kaiser-Meyer-Olkin measure of sampling adequacy was <0.8 (0.55–0.73), indicating only moderate correlation of each item with the entire scale [27]. We thus refrained from using the factor scores for further examination, but proceeded with our analysis on the item level.

In order to examine the probability for change in public attitudes, we used multinomial logistic regression analyses, with responses grouped into 3 categories 'agree' (1 and 2 on the scale), 'undecided' (3 on the scale) and 'disagree' (4 and 5 on the scale). To adjust the year effect for demographic differences across samples, these analyses controlled for gender, age and educational attainment of the respondents. To illustrate the magnitude of changes, discrete probability changes were calculated for all items. A discrete change coefficient is the difference in the predicted probability of a given outcome between 1990 and 2011 calculated with control variables held at their means for the combined sample. Ninety-five percent confidence intervals were computed with the delta method. To make adjusted predictions comparable to unadjusted predictions, probabilities and discrete changes were multiplied by 100 and can thus be read as percentages. The calculation of probability changes and the testing for differences in probabilities between 2 time points were carried out by means of the modules prvalue and prchange [28, 29] using Stata [30].

Results

Table 2 shows the pair-wise correlation matrix of the 7 items, yielding overall low to moderate correlation coefficients. Items related to blame and behavioral control (items 1–3) showed the strongest intercorrelations (R 0.35–0.54). These items also showed a weak negative correlation with the view that alcoholism is an illness like any other (R –0.14 to –0.24). Trivializing the problem as a normal life habit correlated positively with the belief that 'alcoholics could control their drinking' if they had more discipline (R 0.24), and negatively with the belief that they need therapeutic help (R –0.22).

Table 3 provides results from a principal component factor analysis with varimax rotation. The items 'alcoholism results from weakness of character', 'alcoholics are themselves to blame for their bad fate' and 'with more discipline, alcoholics could control their drinking and drink normally' did load most strongly on factor 1, termed

Table 3. Principal component factor analysis of all items with varimax rotation, rotated factor loadings (n = 2,189)

Item	Factor 1 'blaming'	Factor 2 'endorsing an illness concept'	Factor 3 'trivializing the problem'
(1) Alcoholism results from weakness of character	**0.85**	0.01	–0.03
(2) Alcoholics are themselves to blame for their bad fate	**0.82**	–0.05	0.07
(3) With more discipline, alcoholics could control their drinking and drink normally	**0.59**	–0.13	**0.45**
(4) An alcoholic cannot stop drinking without therapeutic help	0.07	**0.70**	–0.35
(5) Alcoholism is almost always resulting from psychological problems	0.00	**0.66**	–0.12
(6) Alcoholism is an illness like any other	–0.39	**0.60**	**0.44**
(7) Drinking very large amounts of alcohol is an acceptable life habit	0.09	–0.12	**0.83**
Eigenvalue	2.10	1.30	1.03
Percentage of variance accounted for	27.1	17.7	17.4

High factor loadings are printed in bold type.

Table 4. Changes in illness beliefs and stereotypes related to alcohol dependence in Germany in 1990 and 2011 (multinomial logistic regression)

Item	Response	1990	2011	Probability change (95% CI)
(1) Alcoholism results from weakness of character	agree	42.4	45.1	3.8 (–1.6 to 7.1)
	undecided	**29.3**	**24.4**	**–4.9 (–8.7 to –1.0)**
	disagree	28.3	30.5	2.1 (–1.8 to 6.1)
(2) Alcoholics are themselves to blame for their bad fate	agree	29.5	30.1	0.6 (–3.3 to 4.6)
	undecided	33.6	37.6	4.0 (–0.1 to 8.2)
	disagree	**36.9**	**32.3**	**–4.6 (–8.8 to –0.5)**
(3) With more discipline, alcoholics could control their drinking and drink normally	agree	32.7	35.1	2.5 (–1.6 to 6.6)
	undecided	**20.4**	**24.6**	**4.1 (0.5 to 7.7)**
	disagree	**46.9**	**40.3**	**–6.6 (–10.9 to 2.3)**
(4) An alcoholic cannot stop drinking without therapeutic help	agree	**79.3**	**75.8**	**–3.6 (–7.2 to 0.0)**
	undecided	**12.0**	**15.6**	**3.6 (0.6 to 6.6)**
	disagree	8.6	8.6	0.1 (–2.4 to 2.4)
(5) Alcoholism is almost always resulting from psychological problems	agree	**77.7**	**69.1**	**–8.6 (–12.3 to –4.8)**
	undecided	**15.9**	**21.4**	**5.5 (2.2 to 8.9)**
	disagree	**6.5**	**9.5**	**3.1 (0.8 to 5.4)**
(6) Alcoholism is an illness like any other	agree	55.1	55.8	0.7 (–3.6 to 5.0)
	undecided	15.3	17.7	2.4 (–0.8 to 5.6)
	disagree	29.6	26.5	–3.1 (–6.9 to 0.8)
(7) Drinking very large amounts of alcohol is an acceptable life habit	agree	8.1	7.8	–0.3 (–2.6 to 2.1)
	undecided	13.7	14.5	0.8 (–2.2 to 3.8)
	disagree	78.2	77.7	–0.5 (–4.1 to 3.1)

Significant changes are in bold. CI = Confidence interval.

as blaming the individual. Factor 2 was represented by the items 'an alcoholic cannot stop drinking without therapeutic help', 'alcoholism is almost always resulting from psychological problems', and 'alcoholism is an illness like any other', termed as endorsing an illness concept. 'Drinking very large amounts of alcohol is an acceptable life habit' did load on factor 3, thus termed as trivializing the problem. Two other items loaded meaningfully on this factor: 'alcoholism is an illness like any other', and 'with more discipline, alcoholics could control their drinking and drink normally'. This shows that these items are ambiguous: '… could control their drinking' can either imply blame or indicate that the problem is not particularly severe. Similarly, '… an illness like any other' can be understood as stressing either the illness character or the normality of the problem. Different respondents may indeed have understood these items differently.

Table 4 shows the predicted probability of each outcome on the item level (in %) and probability changes between 1990 and 2011. Results are controlled for the level of education, sex and age of the respondents. Changes were generally low, and frequently below the level of significance. For example, about 42–45% of the respondents in 1990 and in 2011 agreed that alcohol dependence results from weakness of character; there was no significant difference. In both 1990 and 2011, 30% agreed that 'alcoholics are themselves to blame for their bad fate', and about one third assumed that 'with more discipline', they 'could control their drinking'. About 55% regarded alcohol dependence as an 'illness like any other' and 8% in both surveys trivialized the problem as an 'acceptable life habit'. Overall, the biggest change concerned the item 'alcoholism is almost always resulting from psychological problems', which received less support (–9%) and more opposition (3%) in 2011 compared to in 1990. Looking at the changes that were significant, there was a slight tendency towards more blame (less disagreement with items 2 and 3), and less support for an illness concept (less agreement with items 4 and 5). Repeating these analyses with the uncollapsed 5-point answer scale yielded similar results.

Discussion

Summarizing our findings, 3 factors emerged: 'blaming the individual', 'endorsing an illness concept' and 'trivializing the problem' within our 7-item scale. Analysis of the time trends of beliefs about alcohol dependence showed a remarkable similarity in public attitudes in 1990 and 2011. A stable proportion of one third to almost one half blamed those affected for their illness, and if any change was observed, it was that more blame was indicated rather than less. On the other hand, 3/4 acknowledged that therapeutic help is needed to overcome alcohol dependence, although this proportion had decreased slightly. Half of the respondents saw alcohol dependence as 'an illness like any other' and 8% trivialized the problem as an 'acceptable life habit'.

The results of our study have to be seen in the light of its limitations. First of all, the items used were not developed to represent a scale with good psychometric properties. When the items were first used in 1981 for a local population study in the German city of Saarbrücken, Stein [26] aimed to demonstrate the paradox and contradictions in the attitudes of the public towards alcohol dependence by juxtaposing single items, e.g. the similarly high endorsement of 'an alcoholic cannot stop drinking without therapeutic help' and 'with more discipline, alcoholics could control their drinking and drink normally' [26, p. 139]. The survey in 1990 adopted these items, and since we were interested in trends over time regarding attitudes, we had to use exactly the same items in 2011. The results of our factor analysis reflected the ambiguity inherent in some of the items and prevented the use of factor scores for our time trend analysis. Future studies using scales developed to adequately represent the factors 'blaming the individual', 'endorsing an illness concept' and 'trivializing the problem' would be necessary to corroborate this potential factor structure of public beliefs about alcohol dependence and examine specific correlates of these beliefs. A second limitation is that our results apply only to Germany, although comparative studies do show that attitudes towards schizophrenia and depression have developed in parallel in different Western countries, suggesting that this could also apply to alcohol dependence [31]. Studies from the UK and USA showed similarly stable or worsening attitudes towards people with alcohol dependence [23, 24]. Thirdly, our questionnaire used the terms 'alcoholism' and 'alcoholic', which may have carried some stigma. However, both surveys in 1990 and 2011 used exactly the same wording, so any bias due to the wording of the items did not affect the observed changes in attitudes.

Rather than discussing the very small changes in attitudes observed over more than 20 years, the more pertinent question would be: Why have attitudes towards alcohol dependence and people suffering from this problem not improved over the last 20 years? Indeed, there has been a striking scarcity of anti-stigma initiatives focusing on alcohol or other substance abuse disorders during the last 2 decades [10, 32]. This distinguishes alcohol and other substance abuse disorders from schizophrenia, depression or 'mental illness' in general. A recent review on such initiatives worldwide identified 59% that were concerned with 'mental illness', 28% concerned with schizophrenia and 9% concerned with depression but none concerned with substance abuse disorders [33]. One could argue that this highlights discrimination regarding substance abuse disorders within the anti-stigma movement itself [34]. However, even where schizophrenia and depression are concerned, the numerous anti-stigma initiatives have not consistently changed public attitudes for the better. In Germany, attitudes towards people with schizophrenia actually got worse between 1990 and 2011, while attitudes towards people suffering from depression have, in general, not changed either [25]. A similar trend has been

observed in other Western industrialized countries [31]. So it would be shortsighted to blame the persistence of the stigma related to alcohol dependence on a lack of effort to reduce such a stigma.

Is promoting an illness concept a promising strategy for diminishing the stigma of alcohol dependence? As we outlined in the introduction, the stigma of alcohol dependence seems to have a strong normative component which distinguishes it from the stigma of other mental disorders that evoke less blame. The comparatively high and stable proportion of respondents found to hold alcohol-dependent individuals responsible for their condition and the finding that only 8% of the respondents regarded heavy drinking as an 'acceptable life habit' demonstrate that alcohol dependence is a violation of the boundaries of acceptable behavior [8, 9]. There are some indications that endorsing an illness concept of alcohol dependence has beneficial effects on attitudes towards those suffering from this disorder. In the 1970s, a study among civil service supervisors showed that endorsing the statement 'problem drinking can best be classified as a physical disorder' was associated with more social acceptance and understanding of the affected person [35]. A recent population study of the correlates of certain causal beliefs of mental disorders showed that for alcohol dependence, the belief in biological causes was associated with less blame and more social acceptance, which is quite different from schizophrenia and depression, where this belief was associated with more rejection [36]. In this study, we found a weak but significant negative correlation between seeing alcohol dependence as an illness and blaming the individual for it. Thus, further promoting the illness concept of alcohol dependence could be seen as a means to ameliorate the stigma of this condition.

However, the illness concept of alcohol dependence is limited in being able to change attitudes. The above-cited study on causal beliefs also showed that biological illness concepts are associated with a stronger belief that people with alcohol dependence are dangerous [36]. Furthermore, an illness concept does little to solve the tension between the behavioral aspects of alcohol dependence and the normative components of the stigma. An illness concept does not preclude notions of 'irresponsibility' which are probably at the heart of the stigma attached to alcohol dependence. There is no simple solution to the paradox that, although people with alcohol dependence need to take personal responsibility for changing their behavior, it is inadequate to simply judge them as being 'irresponsible' if they do not manage to abstain from alcohol, because this ignores the illness aspect of alcohol dependence. Williamson [37] argues that the complex ethical issues surrounding the stigma attached to alcohol dependence demand an ethical remedy rather than a medical one. If the normative character of alcohol dependence stigma is taken seriously, it would be necessary to acknowledge that the purpose of stigma, to prevent and to control unwanted behavior, is right, but to insist at the same time that stigma is a dysfunctional way to accomplish this goal [5]. 'To better manage the stigma that impedes responses to dependence, public concerns about … harms must be addressed, but in a manner that avoids increasing stigma' [37, p. 4]. As we have argued earlier, stigma is an inappropriate means to combat alcohol dependence: it does not prevent heavy drinking, which is a socially accepted behavior, but instead prevents help-seeking if drinking has become a problem. It does not strengthen people with alcohol dependence, but isolates them and diminishes their self-esteem and self-efficacy [5, 10]. The failure to offer an adequate response to the normative concerns that surround responsibility makes the negative attitudes towards people with alcohol dependence understandable, even though they are neither desirable nor helpful. In order to reduce stigma, a response to the problem of alcohol dependence needs to be found that is more credible to the public than a simple biological illness model and more effective than stigma in combatting alcohol dependence.

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