



Looking at Economic Analyses of Drugs and Economic Recession (LEADER)

Impact of economic recessions on use of illegal drugs: A literature review, client reality check, and regression analysis

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Executive summary

This report examines the impact of economic recessions on substance use. We have performed a systematic literature review in which we aimed to systematically identify empirical evidence of mechanisms that explain how economic recessions affect substance use. The primary aim is to describe how economic recessions affect use of *illegal drugs*. Because we found limited empirical evidence on the impact of economic recessions on use of illegal substances, we also examined the impact on two licit substances: *tobacco* and *alcohol*. Evidence on these two substances may give insight into mechanisms that are also relevant for illegal drugs and provide a way to cover the current gap in knowledge about illegal drugs.

In addition, we performed two smaller studies. A client reality check was undertaken to examine the perspective of illegal drug users receiving treatment in three different jurisdictions. This study focused on illegal drug use, but clients were also asked about their use of tobacco, alcohol, and *new psychoactive drugs*. Additionally, a regression analysis was undertaken to examine the macro-level relationships between economic recessions and deaths from substance use using routinely available data for 28 European countries. For the regression analyses, we only had data on alcohol and drugs.

Literature review

A realist literature review was undertaken, which is an explanatory method that helps to discern what works for whom, in what circumstances, in what respects, and how. Realist reviews aim to demonstrate effects by understanding the underlying mechanism that connect an event to an outcome in a specific context. The primary research question was: How have economic recessions produced short-term effects on the use of illegal drugs, tobacco, and alcohol in the adult population?

We searched six databases with medically oriented, psychological, economic, and sociological peer-reviewed English literature. In addition, we searched for non-peer-reviewed literature and literature in Polish, Hungarian, Spanish, and Dutch. We also added literature about the relation between unemployment and illegal drug use, outside the context of an economic recession, because little literature was available on economic recessions and illegal drug use. In total, 20 papers were included about illegal drug use and 27 papers on tobacco use. A previous review already examined the impact of economic recessions on alcohol use (De Goeij et al., 2015). This review included 35 papers. Our complementary search of papers published after this review and of non-peer-reviewed and non-English literature included 14 additional papers. Empirical evidence from any study design could be included in the review, e.g. econometric studies, cross-sectional and longitudinal survey studies, and qualitative studies.

We found that an economic recession can affect substance use in many varying ways depending on the substance in question and also on the context. When people experience budget constraints during an economic recession some may choose to spend less money on illegal drugs, tobacco, or alcohol. They may use fewer substances or they may simply buy cheaper products. However, when people experience psychological distress during an economic recession they may choose to use more illegal drugs, tobacco or alcohol because they think this will help them cope with the stress. Additionally, when people have more non-working time during an economic recession, they may choose to use this time for more substance use (most likely for illegal drug use) or for substance use treatment (most likely for tobacco treatment). Finally, losing one's job may lead to a loss of social status and to social exclusion, which may be coped with by using more illegal drugs, tobacco, or alcohol.

The results revealed that mechanisms that increased illegal drug use after the start of an economic recession dominated. Psychological distress and non-working time increases, which

both can lead to an increase in drug use. For tobacco and alcohol use, both mechanisms that increased and decreased use were present. The dominant mechanism for alcohol use, that was found in all population subgroups in all countries in a previous literature review, was a decrease in income after the start of an economic recession, which can lead to a decrease in alcohol use.

Client reality check

We undertook a “reality check” of the pre-existing and LEADER research findings on the relation between economic recessions and drug use and drug-related problems, with a particular focus on illegal drug use and related problems. The survey of client reality check study was performed in three different jurisdictions: Catalonia, Poland and England.

A total of 180 patients, 60 from each country, attending to an addiction treatment facility answered the questionnaire. The majority of the participants were men, with a mean age of 36 years, with at least secondary studies. Almost nine in ten of the participants were polydrug users, and there was an important heterogeneity in drugs used. The main drug for which patients began treatment was heroin. Two thirds of the patients have been using drugs for more than 10 years.

More than a half of the participants increased drug use during the recession and the main reason given was having more free time available and to cope with stress as they lost a stable source of income. A quarter cut down amount of drug used, and the main reason was because of economic difficulties. Drug use reduction was compensated by smoking more in almost half of the patients who cut down their illegal drug use and increasing alcohol use in more than one third. Half of the participants found their main drug easier to get hold of, and the vast majority of them thought this was due to more substance available.

Regression analysis

In the regression analyses, we have taken routinely available data for 28 European Union countries to explore the relationships between economic recessions and harm related to alcohol and illegal drug use. We used unemployment as our indicator of economic recession, the independent variable. We wanted the same outcome (dependent) variables for alcohol and drug use. We had hoped to use survey data, but for most countries, this is not available on an annual basis, and so cannot be used. Instead, we used mortality data from the WHO Health For All (HFA) database. We also investigated if key factors might modify the relationships between unemployment and deaths from alcohol and drugs. We used two factors: expenditure on health care; and, expenditure on social protection.

Examining changes from one year to the next found inverse associations between annual changes in unemployment and annual changes in deaths from alcohol. No relationships were found between annual changes in unemployment and annual changes in deaths from drugs. Adding data on health and social protection expenditure did not change the results.

Overall conclusion

Both the findings from the literature review and the client reality check suggest that *illegal drug use* may increase after the start of and during an economic recession. Possible mechanisms are an increase in psychological distress and an increase in non-working time after people lose their job. Both can lead to an increase in illegal drug use.

The dominant mechanism for *alcohol use*, that was found in all population subgroups in all countries in a previous literature review, was a decrease in income after the start of an economic recession, which can lead to a decrease in alcohol use. This was in line with the main finding from the regression analysis of macro-level data from 28 European countries, in which we found that increases in unemployment were associated with a reduction in deaths from alcohol.

For *tobacco use*, there was supportive evidence in the literature review that individual budget constraints led to less spending on tobacco by either lowering the consumption or by buying cheaper tobacco. There was also sufficient evidence to indicate that either the experience or the fear of losing one's job could lead to more psychological distress, which may be coped with by using more tobacco. The pro-cyclical mechanism that people have more time for smoking cessation treatment due to an economic recession was partly supported. Thus, for tobacco use, both mechanisms that increased and decreased use were present.

A possible explanation for the difference in findings between illegal drug use, alcohol use, and tobacco use may be that illicit drug use is an illegal activity, while tobacco and alcohol use are legal activities. For people who already engage in illegal activities, budget constraints may not withhold them from buying substances with money obtained from other illegal activities. And thus there is no mechanism that decreases illegal drug use during times of economic recession.

1. Introduction

1.1 Background

An economic recession has not only financial consequences but it may also have health and social impacts. Economic recessions have been correlated with deteriorations in mental health and increases in suicides (Stuckler et al., 2015; Uutela, 2010; Van Hal, 2015). This report focuses on investigating the impact of economic recessions on use of substances. A recent review concluded that some studies found that substance use increases after the start of an economic recession, while other studies found that substance use decreases at the aggregate population level (Van Hal, 2015). These opposite outcomes could be explained by the fact that changes observed at the aggregate population level may be the result of opposing individual-level mechanisms. Additionally, the broader context of an economic recession in a specific country will expectedly affect whether the impact on substance use will be either positive or negative. It thus seems important to examine not only *whether* economic recessions affect substance use, but also *how* (through which mechanisms) economic recessions might produce these effects (Stuckler et al., 2015). This question is of scientific interest, but also of practical interest, because an intervention cannot be designed to reduce possible negative effects of economic recessions on substance use when it is unknown which mechanisms this intervention should target (Stuckler et al., 2015; Xu, 2013).

In this report, we therefore examine the mechanisms that may help to explain how economic recessions affect use of different substances and the contexts in which this happens. Additionally, we perform a macro-level analysis of the relationship between economic indicators and deaths from substance use, to examine what happened in 28 European countries at the aggregate level during the recent recessions. A third qualitative study investigates the potential impact recessions may have on the drug use of people in treatment for drug use in three EU countries.

In this report, we make distinction between economic downturns or crises and ‘technical economic recessions’. We define a ‘technical economic recession’ as two consecutive quarters of negative economic growth as measured by a country’s real (inflation adjusted) Gross Domestic Product (Claessens & Kose, 2009). Our main focus in this report is on illegal drug use, but we also examine tobacco and alcohol use, as this may generate information on mechanisms that may be specific to illegal drug use. Illegal drugs are drugs which are under international control but which are produced, trafficked, and/or consumed illegally (UNODC, 2015). We also searched for literature on new psychoactive drugs or designer drugs, but no empirical literature was available that examines how economic recessions affect use of these types of drugs. We did ask about use of new psychoactive drugs in our client reality check.

1.2 Pro-cyclical mechanisms

Review studies, empirical studies, and commentaries on economic recessions and substance use describe a number of possible individual-level mechanisms. Some of these mechanisms predict a pro-cyclical relationship, when substance use decreases during an economic recession as follows:

Mechanism 1: Income-effect

A reduction in income due to job loss or less hours of paid work may result in a tighter budget, which may lead to less spending on substances by lowering the consumption of illegal drugs,

tobacco, or alcohol or by buying cheaper products (Bretteville-Jensen, 2011; De Goeij et al., 2015; Dubanowicz & Lemmens, 2015; Henkel, 2011; McClure et al., 2012; Ritter & Chalmers, 2011). For example, a man living alone in the Netherlands loses his job. He used to earn €2100 net per month. Now, he gets €1400 net per month as unemployment allowance. When he still had his job, he would go out each weekend and use ecstasy with his friends. He was also a daily smoker of factory-made cigarettes. Now, he has just enough money to pay the rent and insurances, and to buy his groceries and clothing. He does not have enough money to go out that often and thus his use of ecstasy decreases. Instead of factory-made cigarettes, he now smokes roll-your-own tobacco, which is much cheaper.

Mechanism 2: Increase job chances

Both people with and without a job may use less illegal drugs, tobacco, or alcohol because this increases their chances of holding on to or getting a job (De Goeij et al., 2015; Henkel, 2011). In Spain, for example, the economic recession that began in 2008 has led to a dramatic increase in unemployment rates (Aguilar-Palacio et al., 2015). Youth unemployment rate (below 25 years of age) was as high as 57% in 2013. Thus a young couple in Spain who wanted to marry and live together would be in desperate need for paid work to accomplish these wishes. The Spanish young man in this example gets a small unemployment allowance, but the young woman who graduated after the start of the recession, and never found a job, does not receive an allowance. They may choose to stop using marihuana, because this will increase their chances of finding a job.

Mechanism 3: Increased non-working time

Losing one's job and losing work hours typically leads to more non-working time, which could increase the time available for treatment of illegal drug use, tobacco use, or alcohol addiction, eventually leading to less use (McClure et al., 2012). This mechanism is most often mentioned in the tobacco literature and is not mentioned in literature about use of illegal drugs. The mechanism may thus be specific for tobacco treatment and use. Furthermore, this mechanism is likely to be more present in countries where treatment is reimbursed by health insurances or where disadvantaged groups are targeted by specific services. In the United Kingdom, for example, stop smoking services have focused on reaching financially disadvantaged smokers (Bauld et al., 2007). They are exempted from paying the (small) prescription charge for medications. Smoking cessation services are also based and promoted in deprived areas. Financially disadvantaged smokers in the United Kingdom who lose their job may choose to spend the extra time that they now have on visiting the smoking cessation services and try to quit smoking.

1.3 Counter-cyclical mechanisms

Other individual-level mechanisms predict a counter-cyclical relationship, when substance use increases during an economic recession:

Mechanism 4: Self-medication

The experience of losing one's job may lead to more psychological distress, which may be coped with by using more illegal drugs, tobacco, or alcohol (Bretteville-Jensen, 2011; De Goeij et al., 2015; Dubanowicz & Lemmens, 2015; Falagas et al., 2009; Henkel, 2011; McClure et al., 2012; Ritter & Chalmers, 2011). An example from an extended family from the United States (US) may clarify this mechanism. Several members of this family lost their job after the start of the recession. They have trouble paying the rents of their houses and medical bills, and are thinking about all moving in together. The situation of trying to find a new job, being behind on rent, having unpaid medical bills, and having to provide for their families is stressful for all

family members. When they come together and talk about their problems, more and more alcohol is served. This helps them to relax and release some of the tension.

Mechanism 5: Fear of job loss

The fear of losing one's job may lead to more psychological distress, which may be coped with by using more illegal drugs, tobacco, or alcohol (De Goeij et al., 2015; Dubanowicz & Lemmens, 2015; Falagas et al., 2009; Henkel, 2011; Ritter & Chalmers, 2011). A 50-year old woman from Iceland who has managed to combine her cocaine habit with work as a financial assistant at a large company is shocked when the economic recession strikes. Both in her work and in private situations she notices that prices of all kinds of products have increased dramatically after the start of the recession. Iceland has a small open economy with its own currency, which has the consequence that the entire population is affected by the economic recession, despite a strong system of social support (Ásgeirsdóttir et al., 2014). The woman is afraid she might lose her job, as a large round of resignations is scheduled to take place next month. She experiences a lot of stress due to the prospect of potentially losing her job in an economy with increasing prices. Cocaine helps her to cope with this stress and, therefore, she increases her use.

Mechanism 6: Deterioration in social situation

Losing one's job may lead to a loss of social status and to social exclusion, which may be coped with by using more illegal drugs, tobacco, or alcohol (De Goeij et al., 2015; Dubanowicz & Lemmens, 2015). For example, a 30-year old man from Italy is very proud of his job as communication manager. His family and friends think it is really something that he already is a manager at his age. But then, the company where he works gets into financial troubles due to the economic recession. A reorganization follows and the entire communication department gets fired. The man feels he is ridiculed by his family for not being a manager anymore. His friends stop hanging out with him, because he is not as interesting anymore as he was when he still had a manager's job. The man starts drinking more than he used to. This helps him feel a little bit better.

Mechanism 7: Increased non-working time

Losing one's job and having less work leads to more non-working time, which could increase the time available for using illegal drugs, tobacco, or alcohol (Bretteville-Jensen, 2011; De Goeij et al., 2015, Dubanowicz & Lemmens, 2015; Ritter & Chalmers, 2011). This mechanism is more relevant for time-intensive activities than for less time-intensive activities (Xu, 2013). Illegal drug use and alcohol use are more time-intensive than tobacco use, as users can still function normally when they use tobacco, and will thus have no problems using tobacco during work breaks. A woman in Germany loses her job because of an economic recession. Her husband still has his job and they have no children. The woman spends her mornings searching for vacancies, but in the afternoons she gets bored. An acquaintance offers her cannabis, so she can take her mind off her worries and has something to pass the time. Before the recession, she never used cannabis in the afternoon.

1.4 Contexts

The above examples illustrate different possible mechanisms of how economic recessions affect substance use, but they also describe different contexts. A young man who loses his job in Spain may respond differently than an older woman who loses her job in Iceland. The unemployment rate in a country, the social security system, price increases, the health insurance system, austerity measures, sociodemographics, and other contexts can all influence

what happens to individual substance use when an economic recession hits. Therefore, it is important to take this context into account.

1.5 Aim and approach of the literature review

In the literature review, we aim to systematically identify empirical evidence of mechanisms that explain how economic recessions affect substance use. The primary aim is to describe how economic recessions affect use of illegal drugs. Because we found limited empirical evidence on the impact of economic recessions on use of illegal substances, we also examined the impact on two licit substances: tobacco and alcohol. Evidence on these two substances may give insight into mechanisms that are also relevant for illegal drugs and provide a way to cover the current gap in knowledge about illegal drugs.

A recent network analysis of literature on the health impact of economic recessions has found that the research literature is quite isolated within disciplines, with for example economic studies predominantly citing each other (Stuckler et al., 2015). Therefore, we reviewed the literature from a broad range of disciplines: medically oriented, psychological, economic, and sociological literature.

We conducted a realist literature review, which is an explanatory method that helps to discern what works for whom, in what circumstances, in what respects, and how (Pawson et al., 2005; Pawson, 2006). Realist reviews aim to examine *how* complex phenomena work, and in what contexts they occur. The method is especially useful for synthesizing methodologically diverse empirical studies. It is preferred as a method over the regular systematic review in this case because of the complex nature of potential processes by which economic recessions have an effect.

Realist reviews aim to investigate causal effects by understanding the underlying mechanism (M) that connects an event to an outcome (O) in a specific context (C) (Pawson et al., 2005; Pawson, 2006). Take for example the fictitious situation in which the economic recession leads to more illegal drug use (outcome) because people are afraid to lose their job (mechanism) in a country where there is a strong system of social support, but prices are also increasing due to the recession (context). In the current realist literature review, we hypothesize and test such so-called 'CMO configurations' for the relationship between economic recessions and substance use.

1.6 Aim and approach of the two additional studies

In addition to the systematic literature review, we performed two smaller studies: a client reality check and a regression analysis.

In the client reality check, we addressed evidence deficiencies in the existing literature by undertaking a client reality check by engaging clinicians in three countries to interview a subset of their clients, as part of their normal service provision, on the impact of the economic recession on their drug use. Therefore, we have undertaken a qualitative survey with the study subjects, asking a convenience sample of 60 clients per country in drug dependence treatment about the impact of the recession on their drug use and drug-related problems, according to a standardised interview schedule prepared for the project. This qualitative survey focused on the "drug user perspective".

In the regression analysis, we took routinely available data for 28 European Union countries to explore the the macro-level relationships between economic recessions and alcohol and illegal drug use. We used unemployment as our indicator of economic recession, the independent variable. We wanted the same outcome (dependent) variables for alcohol and drug use. We had hoped to use survey data, but for most countries, this is not available on an annual basis, and so cannot be used. Instead, we used mortality data from the WHO Health For All (HFA) database. We also investigated if key factors might modify the relationships between unemployment and deaths from alcohol and drugs. We used two factors: expenditure on health care; and, expenditure on social protection.

2. Methods

2A. Methods of the literature review

A realist literature review (Pawson, 2006) follows six steps: 1) Identifying the research question, 2) Formulating the initial theories, 3) Searching for primary studies, 4) Selecting and appraising study quality, 5) Extracting, analyzing, and synthesizing relevant data, and 6) Refining theory. The steps are not necessarily followed sequentially, they can be overlapping and iterative (Pawson, 2006).

2A.1 Identifying the research question

Our initial research question was: How did economic recessions affect use of illegal drugs? An initial (scoping) literature search for key publications in this area taught us that not much empirical evidence is available on the impact of economic recessions on use of illegal drugs. Therefore, we chose to broaden our review with empirical evidence on the impact of economic recessions on use of tobacco and alcohol. Soon after, we learned that a realist review had been undertaken investigating how economic recessions affect alcohol use (De Goeij et al., 2015). Therefore, we reproduce some results of this previous realist review in this report (with permission and collaboration with the first author) and complement it with new empirical data that has been published since. For illegal drugs and tobacco, a similar review was not found and was therefore executed as planned.

In accordance with the realist review from De Goeij et al. (2015), we restricted our search to short-term effects of economic recessions in the adult population. We did include studies that examined a population that was partly youth (<18 years) and partly adult (≥ 18 years), e.g. a 16 to 24 year age group, as these studies contain information about effects on adults too. Our final research question was: How have economic recessions produced short-term effects on the use of illegal drugs, tobacco, and alcohol in the adult population?

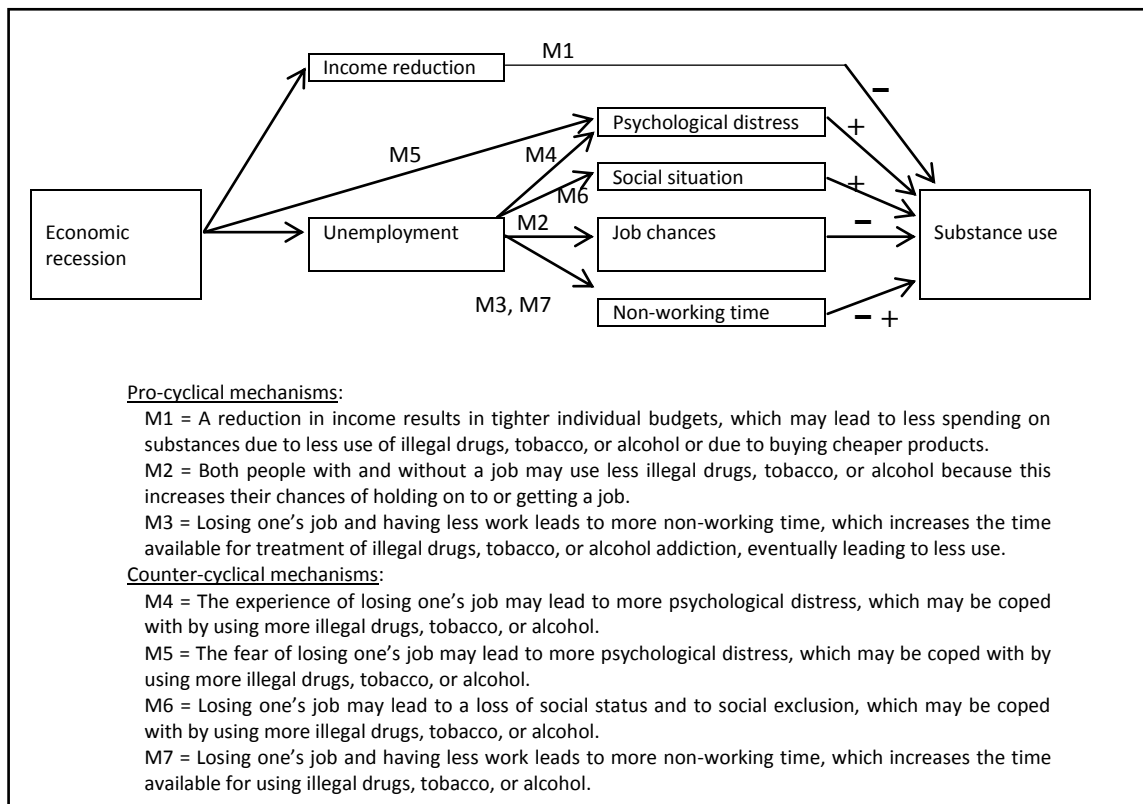
After answering this first research question, we decided to include more literature to examine a secondary research question: How has unemployment produced short-term effects on the use of illegal drugs in the adult population? This was done because little literature was available on economic recessions and illegal drug use and we expected the mechanisms between economic recessions and illegal drug use and between unemployment and illegal drug use to be similar on an individual level.

2A.2 Formulating the initial theories

We identified seven key publications on economic recessions and substance use which were used to formulate our initial theories (Bretteville-Jensen, 2011; De Goeij et al., 2015; Dubanowicz & Lemmens, 2015; Falagas et al., 2009; Henkel, 2011; McClure et al., 2012; Ritter & Chalmers, 2011). These theories served as the basis for a subsequent search for evidence. In these seven key publications, we found several potential individual-level mechanisms through which economic recessions could affect substance use. These potential mechanisms were presented to several key experts through email, who were asked whether mechanisms were missing or should be omitted. Additionally, the potential mechanisms were presented and discussed during a meeting with researchers from the LEADER Project. Based on these expert opinions and discussions, we adapted our theoretical framework and ended up with seven

potential mechanisms through which economic recessions could affect substance use. These mechanisms are already described in the introduction and are graphically displayed in Figure 1.

Figure 1: Initial theoretical framework.



2A.3 Searching for primary studies

After formulating the initial theoretical framework, we searched six databases: EconLit, Embase, Medline, PsycINFO, SocIndex, and Web of Science. These databases contain medically oriented, psychological, economic, and sociological literature. Search terms included synonyms for economic recession and for the outcomes illegal drugs, tobacco, and alcohol (synonyms are displayed in Table 1). We restricted our search to literature published since 1990 and recessions starting in 1990 or later. This was also done by De Goeij et al. (2015), because few empirical studies are available on the impact of economic recessions before 1990.

Table 1: Synonyms used in the first systematic search strategy.

Economic recession	Illegal drugs	Tobacco	Alcohol
Austerity Measure*	Amphetamine*	Cigaret*	Alcohol*
Economic Cris*	Cannabis*	Smoker*	Drinker*
Economic Decline*	Cocaine*	Smoking*	Drinking
Economic Downturn*	Crack*	Tobacco*	
Economic Recession*	Drug*		
Financial Cris*	Heroin*		
Financial Decline*	Marihuana*		
Financial Downturn*	Opiate*		
Financial Recession*	Opium*		
Fiscal Cris*	Substance use*		

In a second search round, we also searched in databases for non-peer-reviewed and non-English literature. To identify non-peer-reviewed English language literature, we searched the ISSDP, OECD, EMCDDA, and UNODC databases and we searched for NBER papers in EconLit. Polish literature was searched via Google, Polish National Library, BazEkon, Ceon, CEJSF, Public Opinion Research Center, catalogue of e-papers of University of Economics Katowice, catalogue of publications of Warsaw school of Economics. Hungarian literature was searched via Google, MATARKA, and Elektronikus Periodika Archivum (Hungarian National Library). Spanish literature was searched via Google, IBECs, and SCOPUS. Dutch literature was searched via Google, PiCarta, and GLIN (Grey Literature in the Netherlands).

Additionally, we re-searched the same six databases of the first systematic search for literature on unemployment and illegal drug use. The literature did not have to be about an economic recession, but we only included literature that examined at least one of the seven mechanisms. The search terms are displayed in Table 2.

Table 2: Synonyms used in the second systematic search strategy.

Unemployment	M1	M2	M3 and M7	M4 and M5	M6	Illegal drugs
Unemploy*	Income	Job chance	Time use	Stress*	Social status	Amphetamine*
Job loss	GDP	Work chance	Work* hour*	Mental health	Social exclusion	Cannabis*
Loosing job	Gross domestic product	Job opportunit*	Work* time		Social withdraw*	Cocaine*
	GRP	Work opportunit*	Leisure-time		Social self-esteem	Crack*
	Gross regional product		Leisure time			Heroin*
	Pay*					Marihuana*
	Wage*					Marijuana*
						Opiate*
						Opium*
						Substance* disorder*
						Substance* abuse*
						Illicit drug*
						Inject* drug*
						Drug* abuse*

2A.4 Selecting and appraising study quality

Appendix Figure A1 shows the selection of papers on tobacco and illegal drugs. The search was performed by the first author on 17 March 2015. First, duplicates were excluded, publications from before 1990, and publications that were not about the topic of economic recessions and illegal drug use or tobacco (based on title or abstract). After this first selection, we were left with 71 papers on tobacco and 107 papers on illegal drugs. These papers were downloaded and the selection was further restricted by the first author to peer-reviewed English-language literature of which the full text was available, that included empirical evidence on individual-level mechanisms, and that examined short-term effects on substance use among adults. Empirical evidence from any study design could be included in the review (Pawson et al., 2005), e.g. econometric studies, cross-sectional and longitudinal survey studies, and qualitative studies.

After this selection, we were left with 24 papers on tobacco and 12 papers on illegal drugs. Although non-peer-reviewed and non-English publications were excluded from the first search round, in a second search round this selection was complemented with non-peer-reviewed publications, non-English publications, and (for illegal drugs) publications outside the context of an economic recession. After these additions, we had 30 papers on tobacco and 25 papers on illegal drugs. All these papers were read by the first author and the study quality was appraised. Realist reviews do not tend to exclude studies based on rigorous methodological standards, but assume that the limitation of one study can often be met with information from another study (Pawson et al., 2005). Therefore, we did not use a formal quality checklist, but judged papers on their overall relevance and rigor. One of the papers on tobacco was excluded because the overall rigor was not satisfactory. The study measures were not described, hypotheses were tested by asking respondents whether they thought there was a relationship, and conclusions were drawn that were not supported by the data.

The selection of papers on alcohol published between 1990 and 1 May 2014 is reported in the realist review of De Goeij et al. (2015), in which very similar procedures were used as in our selection of papers on tobacco and illegal drugs. The search in De Goeij et al. (2015) produced 47 papers on alcohol use that have been published between 1990 and 1 May 2014. We complemented this search with new empirical papers that have been published between 1 May 2014 and 1 May 2015, and with non-peer-reviewed publications and non-English publications. This led to the inclusion of 16 papers on alcohol use (see Appendix Figure A2).

2A.5 Extracting, analyzing, and synthesizing relevant data

Data on relevant mechanisms from the primary studies were extracted by the first author. A summary of the information that was extracted from each study is given in Appendix Table A1 to A6. Extracted data included the country that was examined, the context of the country, mechanisms, study design, study population, determinant, outcome, and results. Based on the extracted data, the first author appraised the level of detail in which the mechanism was described in the paper and the degree of evidence that was generated by the study.

The level of detail in which the mechanism was described in the paper was classified as either 'thick' or 'thin'. Thick descriptions mention the individual economic or social situation (e.g. unemployment), intermediate steps (e.g. psychological distress), and a substance use outcome. Thin descriptions do not mention one or more of these CMO elements. This thick/thin distinction is in line with the approach taken by De Goeij et al. (2015). In most quantitative studies, the descriptions of the mechanisms were given in the introduction as background or in the discussion as possible explanations for study findings. In qualitative studies, the descriptions of the mechanisms were sometimes part of the results of the study.

The degree of evidence that was generated by the study was classified as either 'broad', 'moderate', or 'small'. Broad means that the presented evidence could support or reject the entire mechanism. Moderate means that the evidence could support or reject a part of the mechanism. Small means that no evidence was reported on individual mechanisms or that different substances (e.g. tobacco and alcohol) were not reported separately.

Two papers on tobacco and five papers on illegal drugs generated evidence that was classified as small. These papers were not used in the results section, but they are included in Appendix Table A1 to A6 (grey shading). In the search by De Goeij et al. (2015), twelve papers examined evidence on alcohol that was classified as small. In our complementary search of 16 studies, two studies were classified as small.

The synthesis of the extracted evidence took place by narratively summarizing the findings in CMO configurations that describe in which context (C) an economic recessions triggers individual-level mechanisms (M) that lead to certain substance use outcomes (O). This narrative was structured by substance (illegal drugs, tobacco, and alcohol) and by the mechanisms in the initial theoretical framework (e.g. income-effect, non-working time). Additionally, evidence on pre-post changes in substance use after the economic recession, and evidence on the association between unemployment and substance use were also described, although this evidence does not give information about specific mechanisms from the theoretical framework.

2A.6 Literature search on programs and services

We also performed two literature searches on programs and services. The research question for the first literature search was: To what extent do economic recessions impact negatively or positively on resourcing substance use prevention programs and substance use treatment services? Six databases were searched: EconLit, Embase, Medline, PsycINFO, SocIndex, and Web of Science. Search terms included synonyms for economic recession, health and social welfare budgets, and for substance use or treatment/therapies (Table 3). We restricted our search to literature published since 1990 and recessions starting in 1990 or later. We found 151 papers, of which two turned out to be relevant (Appendix Figure A3). And we found four additional papers after searching the reference lists of the included papers.

The research question for the second literature search on programs and services was: Is there evidence that policies and programs (e.g. social welfare policies and back to work policies) mitigate any negative impact of economic recessions on substance use? The same six databases were searched, with synonyms for economic recession, social welfare policies and programs, and substance use (Table 4). We found 193 papers, of which none turned out to be relevant (Appendix Figure A3).

Table 3: Synonyms used for the search on resourcing substance use programs and services.

Economic recession	Health and social welfare budgets		Substance use or treatment/therapies
Austerity Measure*	Federal budget*	Social budget*	Alcohol*
Economic Cris*	Federal expenditure*	Social expenditure*	Amphetamine*
Economic Decline*	Federal spending	Social spending	Cannabis*
Economic Downturn*	Government budget*	State budget*	Cigaret*
Economic Recession*	Government expenditure*	State expenditure*	Cocaine*
Financial Cris*	Government spending	State spending	Drinker*
Financial Decline*	Health* budget*	Therapies budget*	Drinking
Financial Downturn*	Health* expenditure*	Therapies expenditure*	Ecstasy
Financial Recession*	Health* spending	Therapies spending	Extasy
Fiscal Cris*	National budget*	Therapy budget*	Heavy drug*
	National expenditure*	Therapy expenditure*	Heroin*
	National spending	Therapy spending	Illegal drug*
	Prevention budget*	Treatment* budget*	Illicit drug*
	Prevention expenditure*	Treatment* expenditure*	Inject* drug*
	Prevention spending	Treatment* spending	Marihuana*
	Public budget*	Welfare budget*	Marijuana*
	Public expenditure*	Welfare expenditure*	Methamphetamine*
	Public spending	Welfare spending	Smoker*
			Smoking*

Economic recession	Health and social welfare budgets	Substance use or treatment/therapies
		Substance*
		Therapies
		Therapy
		Tobacco*
		Treatment*
		Xtc

Table 4: Synonyms used for the search on policies and programs mitigating impacts.

Economic recession	Social welfare policies and programs		Substance use
Austerity Measure*	Addiction* policies	Prevention policies	Alcohol*
Economic Cris*	Addiction* policy	Prevention policy	Amphetamine*
Economic Decline*	Addiction* program	Prevention program*	Cannabis*
Economic Downturn*	Addiction* service*	Prevention service*	Cigaret*
Economic Recession*	Addiction* treatment*	Prevention treatment*	Cocaine*
Financial Cris*	Drug* policies	Public policies	Drinker*
Financial Decline*	Drug* policy	Public policy	Drinking
Financial Downturn*	Drug* program	Public program*	Ecstasy
Financial Recession*	Drug* service*	Public service*	Extasy
Fiscal Cris*	Drug* treatment*	Public treatment*	Heavy drug*
	Labor policies	Relief policies	Heroin*
	Labor policy	Relief policy	Illegal drug*
	Labor program*	Relief program*	Illicit drug*
	Labor service*	Relief service*	Inject* drug*
	Labor treatment*	Relief treatment*	Marihuana*
	Labour policies	Social policies	Marijuana*
	Labour policy	Social policy	Methamphetamine*
	Labour program*	Social program*	Smoker*
	Labour service*	Social service*	Smoking*
	Labour treatment*		Substance*
			Tobacco*
			Xtc

2B. Methods of the client reality check

2B.1 Construction of the instrument

The survey questionnaire was constructed ad hoc to address the specific mechanisms for reasons for increasing/maintaining/decreasing use during recession identified on the systematic review of the literature regarding the influence of economic crisis on substance use. The semi-structured questionnaire (Appendix 2) consists of 38 questions. The questionnaire is divided in 4 blocks, Block A includes questions on the demographic characteristics of patients attending an addiction treatment facility; Block B is about perception of the crisis' impact on one's consumption; Block C is about perception of the crisis' impact on society and Block D about perception of the crisis' impact on treatment facilities.

The content of the questionnaire was discussed in detail, and all LEADER partners involved in this task later approved the final version of the instrument after a series of email exchange. The final English version of the questionnaire was translated in Catalonia and Poland to the native language. All three versions of the survey instrument are attached to this report (Appendix 2).

2B.2 Ethics and confidentiality issues

The study did not imply any intervention on patients or on providers, but gathers information for social research purposes. Ethics were dealt locally in each country and in accordance to the local procedures. In Catalonia, the Ethics Committee of the Hospital Clinic of Barcelona approved the study protocol.

This client reality check does not involve clinical research, but solely aims to collect information on social conditions, circumstances, trajectories and behaviours exclusively for social research purposes. Therefore, patients were invited to participate in the study on a strictly voluntary basis, and all answers were treated confidentially and anonymously, following the ICC/ESOMAR code for Social and Market research (<http://www.aedemo.es/aedemo3/pdf/codigo-inter.pdf>).

In this sense, all data collected was anonymous and analysis was performed only on the aggregated data. Following ICC/ESOMAR Article 7 on Data protection and confidentiality, when invited to participate in the study, patients were informed:

- of the aim, purpose and responsible institution carrying out the study,
- of their right to decline participation in such a study,
- and of their right to quit the interview at any moment.

No identifying personal details (such as name, family name, telephone, address, patient ID code...) were collected. Data collected by the anonymous paper-delivered questionnaires were incorporated into an electronic database (SPSS) for statistical analysis purposes. The paper questionnaires were stored safely and accessible only to the research team, and will be destroyed once they are no longer needed. Electronic databases are stored in password protected accounts, and if it is decided in a future moment to preserve the electronic database beyond the completion of the LEADER study as a way to enhance further research, a full assessment and measures will be taken to ensure that the confidentiality of participants is preserved at all times.

Any published reports resulting from this study will be based on aggregated data and will be carefully examined in order to guarantee the anonymity of participants. This confidentiality policy was available to interviewees at any moment throughout their interview.

2B.3 Sampling

Addiction clinicians from Catalonia, England and Poland each asked, as part of their service role, a convenience sample of 60 clients in drug dependence treatment to participate in the study. All clients participating in the sample, on a voluntary basis, were clients reportedly using at least one illegal substance as their primary drug when admitted to treatment.

Patients were interviewed in a variety of drug dependence treatment settings located in the three participating jurisdictions, which provide specialist care in out-patient facilities or community services. Annex 1 gives further details on the participating centres and the profile of clients according to the primary drugs used.

The recruitment procedure was based on a replacement basis: clients were invited to voluntarily provide information in the frame of their usual consultations (thus following the order of the usual appointment schedules) and those who did not wish to take part were replaced by the subsequent consulting clients.

2B.4 Data collection and analysis

Data was collected between June 2015 and February 2016. The information from the questionnaires was put into the data collection form and then typed or transferred into the database. The template for the data set (SPSS file) was designed and prepared in the LEADER centre Fundació Clínic per a la Recerca Biomèdica, Spain. Final statistical analysis and comparisons of a combined data from all countries were conducted as the collection process was completed.

2C. Methods of the regression analysis

Our other work in LEADER found evidence for counter-cyclical mechanisms between economic crises and illegal drug use, implying that drug use increases after the start of an economic crisis. Both counter- and pro-cyclical (when substance use decreases during an economic crisis) mechanisms were present for alcohol use. In the present analyses, we have taken routinely available data for 28 European Union countries to explore the relationships between economic crises and alcohol and illegal drug use. We used unemployment as our indicator of economic crisis, the independent variable. We wanted the same outcome (dependent) variables for alcohol and drug use. We had planned to use survey data, but for almost all EU countries, this is not available on anything like an annual basis, and so cannot be used. For example, for the five-year period 2010-2014, based on data from EMCDDA statistical bulletins, prevalence data for last-year cannabis, the most popular used illegal drug, should have provided 140 data points. It only provided 41. Five countries had no data; 13 had data for one year; seven had data for two years; one had data for four years; and only two countries had data for all five years. Instead, we used mortality data from the WHO Health For All (HFA) database, which is available for all years, and a valid outcome indicator. We also investigated if key factors might modify the relationships between unemployment and deaths from alcohol and drugs. We used two factors: expenditure on health care; and, expenditure on social exclusion protection. Further details below.

For the independent variable, we used per cent unemployment data taken from Eurostat for the period 1990-2015 (years for which data available since 1990) (<http://ec.europa.eu/eurostat/web/products-datasets/-/tsdec450>). For the two dependent variables, we used age-standardized death rates for the age range 15-64 years for alcohol abuse, including alcoholic psychosis (ICD-10 code: F10) and for drug dependence and toxicomania (ICD-10 codes: F11-F16 F18-F19) per 100,000 people for the years 1990-2013, taken from the WHO HFA European database (<http://www.euro.who.int/en/data-and-evidence/databases/european-health-for-all-database-hfa-db>).

For our two covariates, we took health care expenditure per inhabitant for the years 2003-2012 (years for which data available since 1990) (http://ec.europa.eu/eurostat/en/web/products-datasets/-/HLTH_SHA1H) and social protection expenditure (spr_exp_fto, covering social exclusion expenditure) per inhabitant for the years 2003-2012 (years for which data available since 1990) (<http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>) were taken from Eurostat.

We studied relationships between the dependent and independent variables for year by year changes. For example, the relative per cent change in per cent unemployed from 1990 to 1991 was related to the relative per cent change in death rate from 1990 to 1991. For both variables, we calculated $(1991 \text{ data} - 1990 \text{ data})/1990 \text{ data}$. In addition, we examined a one-year time lag by, for example, relating the per cent change in per cent unemployed from 1990 to 1991 to the per cent change in death rate from 1991 to 1992, and for the per cent change in death rate from 1992 to 1993. For the time lags, no associations between dependent and independent variables were identified, and, thus, results are not presented.

SPSS v22 procedure MIXED was used for the analysis. Year was included as a fixed covariate to account for any long term trends. Country was included as both a fixed effect and a random effect in a multilevel analysis, accounting for any country-specific variations that might explain the results.

3. Results

3A. Results of the literature review

3A.1 Illegal drug use

In total, 20 publications about illegal drug use were included. Ten peer-reviewed publications and one non-peer-reviewed English language publication about the impact of economic recessions on illegal drug use (Appendix Table A1 and A5), four non-English language publications about the impact of economic recessions on illegal drug use (Appendix Table A6), and five publications about the impact of unemployment on illegal drug use (Appendix Table A4). Four of these were longitudinal survey studies, ten were cross-sectional survey studies, four were qualitative studies, one used a combination of a cross-sectional survey and a qualitative study, and one used a Delphi study. Eight studies used empirical data from Europe, seven from the US, three from Argentina, and two from Australia. One study examined the early 2000s economic crisis in the United States, which was not a technical economic recession (Arkes, 2011).

As can be seen in Table 5, the mechanisms income-effect (mechanism 1, M1), self-medication (M4), and increased non-working time (M7) were most often described in the studies on illegal drug use. One new mechanism was identified: decreased job chances (M8). During an economic recession the ‘payoff’ of quitting substance use is lower than before the recession because the substance user has a low probability of finding a job after treatment, and therefore does not quit using (Storti et al., 2011). This may lead to increased substance use on the aggregate, population-level.

Although in total seven mechanisms were described in the papers about economic recessions and illegal drug use, not all of them were tested with evidence generated by the study (Table 5, last column). Other mechanisms were only mentioned in the introduction or discussion sections of papers as possible explanations for, for example, the relationship between unemployment and illegal drug use.

Table 5: Number of studies on illegal drug use per mechanism, with distinction according to detail of description and coverage of evidence (n = 20 studies in total).

Illegal drug use	Number of studies in which it is mentioned	Detail of description		Coverage of evidence		Number of studies in which it is tested
		Thin	Thick	Moderate	Broad	
Income-effect (M1)	10	3	7	6	4	7
Increase job chances (M2)	1	1	0	1	0	0
Self-medication (M4)	9	2	7	3	6	7
Fear of job loss (M5)	2	0	2	2	0	0
Deterioration in social situation (M6)	1	1	0	0	1	1
Increased non-working time (M7)	5	1	4	3	2	3
Decreased job chances (M8)	1	1	0	1	0	0

3A.1.1 Pre-post changes in illegal drug use

Three repeated cross-sectional studies reported pre-post changes in illegal drug use after an economic recession and one Delphi study reported experts’ expectations about pre-post changes in illegal drug use after an economic recession. Pre-post changes give us no information about which specific mechanism is at work. We nevertheless describe these

studies here, because they may give us relevant information on the circumstances or contexts under which the relationship between an economic recession and substance use is pro-cyclical or counter-cyclical.

In Spain, during the post-2008 economic recession, cannabis use remained mostly unchanged compared with the period before the recession. Both sporadic and heavy use of hypnotics/sedatives increased among men, while only heavy use increased among women (Colell et al., 2015). It thus seems that counter-cyclical mechanisms have increased use of hypnotics/sedatives in Spain, but not use of cannabis. A possible explanation is that preventive measures have been set up in Spain to inform people of the risks of cannabis use, but the same has not happened for hypnotics/sedatives (Colell et al., 2015). In France, during the post-2008 economic recession, the proportion of injecting drug users rose by 1.7% (Lakhdar & Bastianic, 2011). The Gross Domestic Product (GDP) growth rate declined in France and the unemployment rate rose sharply, but the population was helped with social welfare policies. In Argentina, during the recession of 2001-2002 when poverty increased to half of the country's population, the number of injecting drug users remained stable between 2001 and 2004 (Rossi et al., 2011).

The majority of drug experts in a Delphi study reported that they expected an increase in illegal drug use after the post-2008 economic recession in Europe (Trautmann, 2013). More experts from Bulgaria, the Czech Republic, Italy, and Portugal expected a substantial impact of the economic recession on the drugs market in their country than experts from the United Kingdom, Sweden, and the Netherlands. The experts reported as a possible explanation for this difference that the first four European member states have been more seriously affected by the recession than the other three.

Overall, these studies that examined changes in illegal drug use before and after an economic recession found countercyclical patterns or no changes in drug use.

3A.1.2 Unemployment and illegal drug use

Nine quantitative studies examined the influence of unemployment on illegal drug use. These papers do not give us information about which specific mechanism is at work (i.e. *how* unemployment affects substance use), but may give relevant contextual information.

When the macro-level unemployment rate increased, illegal drug use increased as well (Arkes, 2011; Chalmers & Ritter, 2011). A longitudinal study found that the relationship was stronger for cannabis use than for other drugs in the US during the early 2000s crisis (Arkes, 2011). Although the same counter-cyclical relationship was found for cannabis use in Australia during the early 1990s recession for youth aged 14 to 24 years, the relationship was pro-cyclical for people in their late 30s and 40s (Chalmers & Ritter, 2011).

Other papers examined individual-level unemployment status during an economic recession. Most of these studies were cross-sectional, except for the study by Kalousova and Burgard (2014). Unemployment status was associated with more illegal drug use during an economic recession in Spain (Colell et al., 2015; Gobierno de España, 2015), the US (Compton et al., 2014; Kalousova & Burgard, 2014), and Serbia (Mirnics, 2004). Unemployment was unrelated to marijuana use among Belgium patients of a general practice (unemployment of the person itself or someone close) (Van der Wielen & Vanderroost, 2011). In Spain, the positive association between unemployment and illegal drug use was stronger in men than in women (Gobierno de España, 2015). Furthermore, an exception in Spain was the use of

hypnotics/sedatives during the post-2008 economic recession. Employed men were more likely to have increased heavy use of hypnotics/sedatives during the recession than unemployed men (Colell et al., 2015). The authors mentioned that fear of job loss (M5) may be the mechanism explaining this effect. However, no studies actually measured people's fear of job loss in relation to illegal drug use during an economic recession.

One paper examined the association between individual-level employment and drug use outside the context of an economic recession (Atkinson et al., 2003). This was a longitudinal survey study with seven waves among adult female recipients of assistance for needy families in the US. Employment at one time period reduced the likelihood of drug use in the following period.

In sum, most available studies found counter-cyclical relationships between unemployment and illegal drug use. Exceptions were found for people in their late 30s and 40s in Australia, patients of a general practice in Belgium, and use of hypnotics/sedatives in Spain.

3A.1.3 Income and illegal drug use

The income-effect (M1) mechanism was studied in seven papers. The relationship between macro-level income and use of illegal drugs during an economic recession was reported in two quantitative cross-sectional studies. Falling income level was associated with increased cannabis use (Chalmers & Ritter, 2011) and increased injection drug use (Lakhdar & Bastianic, 2011). Although this seems contrary to the income-effect mechanism, a tighter individual budget may not only lead to reduced spending on illegal drugs, but also to switching to cheaper products. For example, by turning to injection, users maximize the effects of the drugs (Lakhdar & Bastianic, 2011). The user needs less quantity of the product when injecting it and thus spends less money to reach the same effect. In France during the post-2008 economic recession, drug users without stable housing and without a paid job (precarious individuals) were more likely to inject than drug users with stable housing and a paid job (non-precarious individuals). The greatest increase in injecting after the start of the recession compared with before was found among the non-precarious individuals (Lakhdar & Bastianic, 2011). This can be explained by the fact that among non-precarious individuals the economic recession led to tighter budgets, while precarious individuals already had tight budgets.

A longitudinal study examined the association between individually measured decline in economic resources and illegal drug use in the US (Kalousova & Burgard, 2014). It was found that a *measured* decline in economic resources during the post-2007 Great Recession in the US was procyclically associated with a lower likelihood of starting cannabis use. This finding is in line with the income-effect mechanism (M1), but in the same study it was also found that a *perceived* decline in individual economic resources was not related to starting cannabis use (Kalousova & Burgard, 2014).

Ethnographic fieldwork in Argentina revealed that many users switched to psychotropic pills, cannabis, Paco (a cheaper form of cocaine), and alcohol during the 2001-2002 recession (Epele, 2010). Qualitative interviews made clear that people started to associate psychotropic pill use and Paco use with being poor (Epele, 2010; 2011). These two studies were the only ones that described the broader population-level context of prices, availability, and quality of drugs. According to the interviewed drug users, the quality of cocaine deteriorated during the recession, cocaine became scarcer, and more expensive. The price was not always the main reason for switching to psychotropic pills, many former cocaine users took pills because the quality of cocaine became so bad that they worried about the health damage caused by

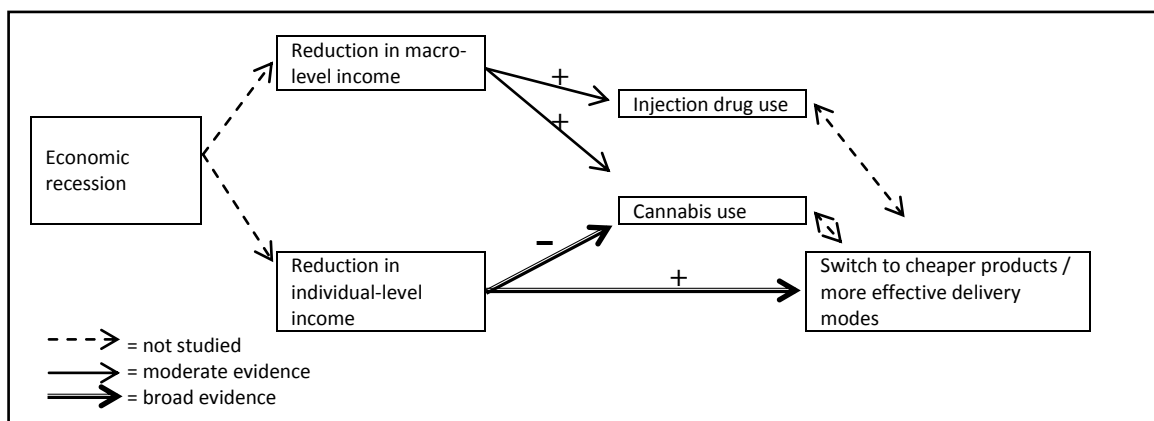
dangerous toxics mixed in with cheaper quality cocaine. Additionally, some medications became extremely scarce and people started substituting one medicine for another and took combinations of pills with drugs or alcohol when they couldn't get the medicine they needed.

Qualitative interviews among young adults from the US who were leaving drug treatment during the Post-2007 Great Recession suggested that income from employment increased drug use (Uggen & Shannon, 2014). When young adults earned larger amounts of income than they were used to, they started doing drugs to spend their money.

Drug experts reporting their views in a Delphi study expected that the post-2008 economic recession in the European Union would lead to switching to cheaper (synthetic) drugs instead of (poor quality) 'classic' drugs (Trautmann, 2013). Especially problem or dependent users were expected to look for cheaper alternatives. A few respondents stated that there might be a shift to cheaper legal alternatives including alcohol or a mix of illegal drugs and alcohol.

In summary, the broadest evidence came from the longitudinal study that examined individual-level income reductions and the studies that used qualitative data. These studies found that income reductions were associated with less cannabis use (in the context of the post-2007 Great Recession in the US) and more switches to cheaper forms of illegal drugs (in the context of the 2001-2002 recession in Argentina and possibly in the context of the post-2008 economic recession in Europe) (see Figure 2 for a graphical representation). Studies that used macro-level income found that income reductions were associated with more injection drug use and more cannabis use. This could be a consequence of switches to cheaper products, but the above described studies did not examine that. It could also be that another mechanism explains the positive relationship between reductions in macro-level income and increases in injection drug use and cannabis use, for example more psychological distress (M4 or M5). Therefore, there was no strong evidence that individual budget constraints reduced illegal drug use, but there was somewhat more evidence that individual budget constraints led to substitution by cheaper products.

Figure 2: Graphical representation of evidence from studies about the income-effect mechanism explaining the relationship between an economic recession and illegal drug use.



3A.1.4 Psychological distress and illegal drug use

The self-medication (M4) and fear of job loss mechanisms (M5) were examined in seven studies, of which three studies were cross-sectional surveys. The first cross-sectional survey examined unemployment, psychological distress, and illegal drug use outside the context of an economic recession among regular ecstasy users of 16 years and older from Australia (George

et al., 2010). There were significant associations found between unemployment and higher levels of distress, and between distress and higher levels of cannabis and methamphetamine use, but not ecstasy use. The second cross-sectional survey was performed among the Hungarian population of 16 years and older (Kopp & Skrabski, 2000). Unemployment, financial, and workplace uncertainty were associated with depression, and depression was associated with more drug use. The third cross-sectional survey found a positive association between unemployment (of the person itself or someone close) and depression among patients of a general practice in Belgium (Van der Wielen & Vanderroost, 2011). This study did examine the relationship between unemployment and drug use (as mentioned in paragraph 3.1.2), but not between depression and drug use.

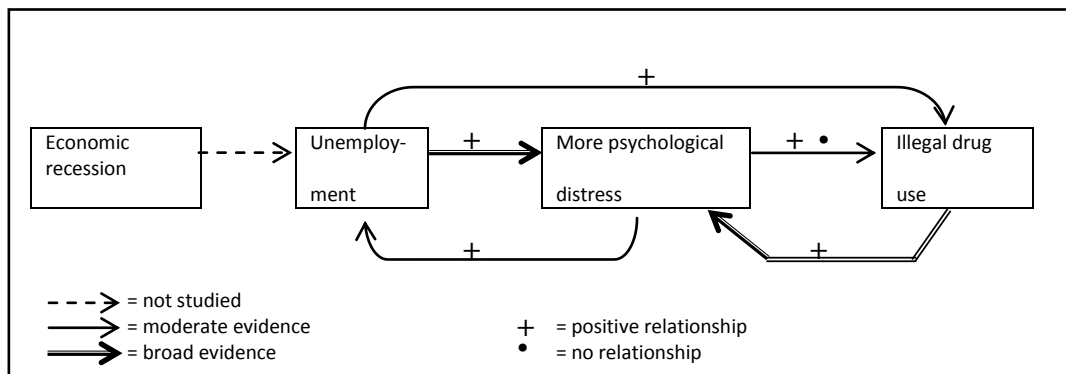
Two longitudinal studies from the US that were performed outside the context of an economic recession revealed complex cyclical and conditional relationships (Atkinson et al., 2003; Brunswick et al., 1992). The first longitudinal study surveyed women recipients of assistance for needy families (Atkinson et al., 2003). It was found that increased hours worked can decrease distress, but changes in psychological distress did not appear to affect subsequent drug use. Results suggested a cycle in which employment at one time period could reduce the likelihood of drug use in the following period, which, in turn, led to improvement in distress. This improvement can lead to an increase in the number of hours worked and further improvements in distress levels. The second longitudinal study surveyed young adult urban community African Americans and found different relationships among men and women (Brunswick et al., 1992). Heavy to moderate drug use appeared to greatly exacerbate men's psychological distress from unemployment. But in the absence of unemployment, drug use – even heavy or daily use- gave no evidence of a distress effect. The model for women showed that moderate and heavy drug use increased distress regardless of their employment status. A more complex relationship emerged for light (less than weekly) drug use among women. Light drug use was associated with increased distress among the regularly employed, but not among the unemployed.

A qualitative study examined use of opioids among recently separated, formerly enlisted veterans from low-income neighborhoods of the New York City area, outside the context of an economic recession (Bennett et al., 2013). Opioids were used both with and without prescription, and often in conjunction with alcohol and/or other pharmaceutical or illegal drugs. Use of these substances was perceived as a means of coping with psychological struggles that veterans experienced because of the war and because of unemployment and housing instability.

The Delphi study reported that drug experts expected psychological problems due to deprivation and social exclusion after the post-2008 economic recession in Europe (Trautmann, 2013). The experts expected an increase in illegal drug use as coping mechanism.

In sum, the above described studies reported that unemployment, psychological distress, and drug use were positively associated with each other, but that this may not be a simple linear process of unemployment increasing psychological distress and psychological distress increasing drug use (Figure 3). Broad evidence from two longitudinal surveys showed that drug use may lead to more psychological distress rather than vice versa. However, it should be noted that the broadest evidence came from studies that were performed outside the context of an economic recession and among very specific subgroups of the population in the US. It is unsure whether the process will be the same during an economic recession and whether these findings can be generalized to other populations.

Figure 3: Graphical representation of evidence from studies about the self-medication and fear of job loss mechanisms explaining the relationship between an economic recession and illegal drug use.



3A.1.5 Working hours and illegal drug use

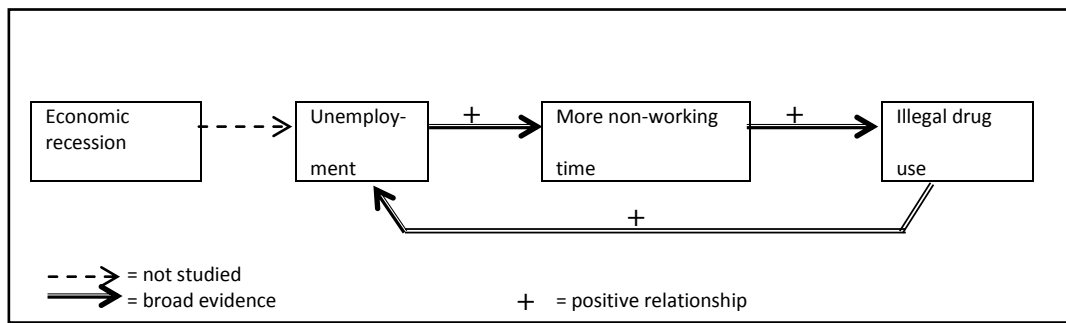
Three studies examined hours worked and illegal drug use. A longitudinal study examined the relationship between hours worked and drug use among female recipients of assistance for needy families in the US (Atkinson et al., 2003). Only during one of the seven survey waves did the number of hours worked have a significant effect in reducing future drug use. In general, drug use led to less hours of work.

One cross-sectional study examined the time spent on activities such as working, looking for work, and using illegal drugs during the 2001-2002 recession in Argentina (Rossi et al., 2011). Time spent at work declined significantly while time spent looking for work increased significantly for injecting drug users compared to the situation before the economic recession. Among past injecting drug users, not working, working less or looking for work was associated with increased time spent using drugs.

During the post-2007 Great Recession in the US, a qualitative study was performed among young adults leaving drug treatment (Uggen & Shannon, 2014). The findings of this study suggest that jobs structured young adults' time, which kept them from using drugs. However, job loss due to drug use was common. Respondents reported that they could maintain a job while using marijuana or pills, but not while using heroin. The authors of the study suggest that stimulants such as methamphetamine and cocaine may be more compatible with some types of employment than central nervous system depressants such as heroin.

The findings from these three studies are consistent with the counter-cyclical increased non-working time mechanism (M7). The evidence generated by the studies is broad, because they support the entire mechanism. It seems that an economic recession can lead to increased non-working time, which can lead to more drug use (Figure 4), and employment leads to more working time, which seems to lead to less drug use. Additionally, using some types of drugs is difficult in combination with a job, and could thus lead to unemployment.

Figure 4: Graphical representation of evidence from studies about the increased non-working time mechanisms explaining the relationship between an economic recession and illegal drug use.



3A.1.6 Social situation and illegal drug use

Only one study examined the mechanism deterioration in social situation (M6). Young adults who were leaving drug treatment in the US during the post-2007 Great recession were qualitatively interviewed (Uggen & Shannon, 2014). The young adults who were employed, reported that informal control and social support at work inhibited drug use. Employment also provided access to networks of peers who were not doing drugs. These findings support the deterioration in social situation mechanism, but more studies are needed to assess whether this also holds for other subgroups and contexts.

3A.2 Tobacco use

Twenty-one peer-reviewed English language papers were included that investigated the impact of economic recessions on tobacco use (Appendix Table A2) and five non-English language papers (Appendix Table A6). No non-peer-reviewed English language papers were found for tobacco use. Ten studies were longitudinal surveys and sixteen were cross-sectional surveys. Fourteen studies used empirical data from the US, while ten studies used data from Europe, one used data from Russia, and one from four countries (Canada, United States, United Kingdom, and Australia). Three studies examined the early 2000s economic crisis in the United States, which was not a technical economic recession (Arkes, 2012; Okechukwu et al., 2012; Shaw et al., 2011).

As shown in Table 6, the studies on tobacco use mainly described the mechanisms income-effect (M1) and self-medication (M4). One new mechanism was extracted: lower interest in health (M9). An economic recession may lead to somber expectations about the future, which may be coupled with reduced consumer interest in future health status and more use of substances (Herzfeld et al., 2014).

Seven mechanisms were described in the papers about economic recessions and tobacco use, but not all of them were tested with evidence generated by the study. Most studies that actually tested a mechanism, tested the income-effect mechanism (Table 6).

Table 6: Number of studies on tobacco use per mechanism, with distinction according to detail of description and coverage of evidence (n = 26 studies in total).

Tobacco use	Number of studies in which it is mentioned	Detail of description		Coverage of evidence		Number of studies in which it is tested
		Thin	Thick	Moderate	Broad	
Income-effect (M1)	17	4	13	9	8	11
Increased non-working time (M3)	7	1	6	4	3	4
Self-medication (M4)	18	7	11	12	6	7
Fear of job loss (M5)	6	1	5	4	2	0
Deterioration in social situation (M6)	1	0	1	0	1	0
Increased non-working time (M7)	3	0	3	3	0	4
Lower interest in health (M9)	1	0	1	1	0	0

3A.2.1 Pre-post changes in tobacco use

Changes in tobacco use during an economic recession were reported in nine papers (Ásgeirsdóttir et al., 2014; Gallus et al., 2015; Jackson et al., 2013; Krasovsky, 2013; Macy et al., 2013; McClure et al., 2012; Nandi et al., 2013; Ruhm, 2005; Verso & Picciotto, 2014). However, only five of them were repeated cross-sectional studies that could take into account secular trends in smoking. During the post-2008 economic recession in Iceland (Ásgeirsdóttir et al., 2014) and Ukraine (Krasovsky, 2013) the decline in smoking prevalence accelerated as compared to the trend before the recession. However, in the US, the early 1990s recession did not seem to have affected smoking prevalence trends (Ruhm, 2005). The same was found during the post-2007 Great Recession in one study (Nandi et al., 2013), while another study found a decelerated decline in smoking prevalence during the Great Recession as compared to the trend before the recession (Gallus et al., 2015).

These pre-post studies give us no information about which specific mechanism is at work. However, it does seem that pro-cyclical mechanisms dominated in the context of the post-2008 economic recession in Iceland and Ukraine. In the US, no changes in tobacco use were found on the population-level in two studies, while one study found a counter-cyclical relationship.

3A.2.2 Unemployment and tobacco use

Seven quantitative studies examined the association between macro-level unemployment rates and tobacco use during an economic recession. The results were mixed. One longitudinal study from the US found that when the unemployment rate increased, the smoking rate increased as well (Arkes, 2012). Three cross-sectional studies found that when the unemployment rate increased, the smoking rate decreased in Europe (Cutler et al., 2015) and the US (Nandi et al., 2013; Ruhm, 2005). Two longitudinal studies from the US found no relationship between unemployment rates and smoking rates (Margerison-Zilko, 2014; McInerney & Mellor, 2012). A possible explanation for these mixed findings is that the unemployment rate has different effects among different subgroups. For example, during the post-2007 Great Recession in the US, when the unemployment rate increased, regular smoking decreased among men, but not among women (Nandi et al., 2013). Another explanation is that the relationship between unemployment rates and smoking rates is not linear. Between 1992 and 2007 in the US, a cross-sectional study found a quadratic association between unemployment rate and number of cigarettes smoked per day (Okechukwu et al., 2012). The

number of cigarettes increased as the economy improved, until the economy was performing as expected. After this, the number of cigarettes decreased with further improvements in the economy. The same quadratic association was found for smoking prevalence, although not significant.

Thirteen quantitative studies examined the relationship between individual-level unemployment status and tobacco use during an economic recession. Only two of these studies used longitudinal data (Herzfeld et al., 2014; Kalousova & Burgard, 2014). Most studies found a positive association between unemployment status and tobacco use, i.e. unemployment status was associated with more tobacco use (Compton et al., 2014; Ferat, n.d.; Gallus et al., 2015; Gobierno de España, 2015; Herzfeld et al., 2014; Jackson et al., 2013; Kalousova & Burgard, 2014; Mirnics, 2004; Okechukwu et al., 2012; Van der Wielen & Vanderroot, 2011). There were some exceptions. In Russia, there was a positive association between regional unemployment rate and tobacco use only among those individuals who still had a job (Herzfeld et al., 2014). In the US, in a study among parents of children with asthma, a positive association between unemployment status and tobacco use was only found after the start of the recession (Jackson et al., 2013). One study did not find an association between unemployment and tobacco use during the post-2007 Great Recession in the US (Macy et al., 2013), possibly because this study did not examine the entire population (a cohort from a Mid-Western county aged 37 to 50 years old was studied). Population studies did find a positive association between unemployment status and tobacco use during the post-2007 Great Recession in the US (Compton et al., 2014; Gallus et al., 2015). Another study during the post-2008 economic recession in Iceland did not find an association between unemployment status and tobacco use (McClure et al., 2012). Finally, one study did not examine tobacco use as outcome, but examined the practice of relighting cigarettes during the post-2007 Great Recession in the US (Zimmermann et al., 2014). This study found that relighting was more common among the unemployed.

In conclusion, studies that examined the relationship between macro-level unemployment and tobacco use during an economic recession showed mixed findings. Individual-level studies found mostly counter-cyclical relationships, with the exception of people aged 37 to 50 years old in the US and people from Iceland.

3A.2.3 Income and tobacco use

Eleven quantitative studies examined the income-effect (M1) mechanism. Only one study examined the influence of the recession on income. This longitudinal study showed that the post-2008 economic recession in Iceland was not followed by a decrease in nominal household income (unadjusted for inflation), but was followed by a substantial decrease in real household income (adjusted for inflation) due to sharp price increases (Ásgeirsdóttir et al., 2014).

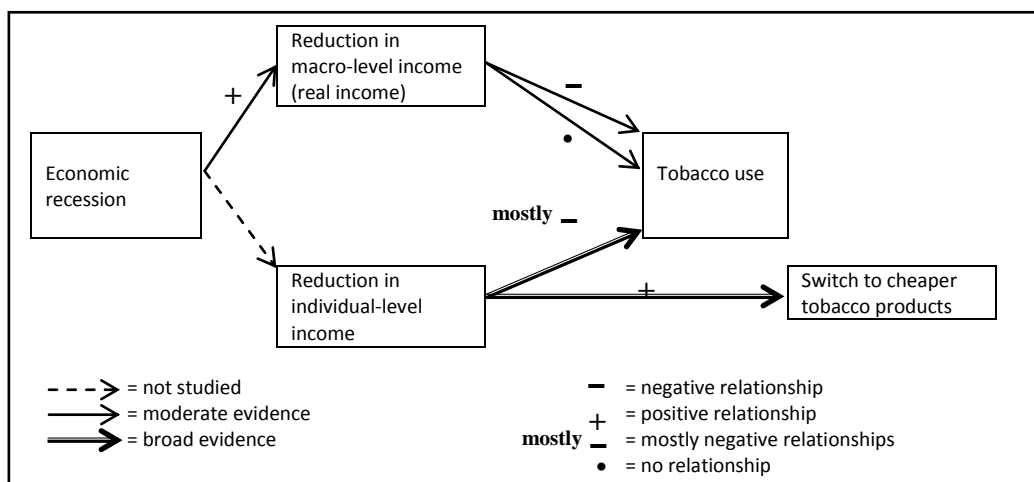
Of the studies that examined the influence of income on smoking during an economic recession, two studies examined the influence of macro-level income. In Russia, women living in higher income regions and areas with higher Gross Regional Product (GRP) growth smoked more cigarettes per day, as shown by a longitudinal study (Herzfeld et al., 2014). A cross-sectional study from the US showed that a rise in income was not associated with a change in tobacco use (Ruhm, 2005).

Ten studies examined the influence of individual-level income on smoking. Most of these found the expected pro-cyclical relationship of the income-effect (M1) mechanism. In Russia, significant income elasticities for cigarettes were found among older consumers (Herzfeld et

al., 2014). In Ukraine, smoking rates declined parallel in all income groups at the start of the recession (2008-2010), but later the decline was only seen among the lowest income groups in a cross-sectional study (Krasovsky, 2013). Financial strain was significantly associated with a lower likelihood of smoking in the US in a longitudinal study (Macy et al., 2013). In Iceland, a drop in income among men who were part of the high-income group at baseline was associated with a decreased risk of relapsing in a longitudinal study (McClure et al., 2012). This association was in the same direction for women, but was not significant. An increase in real wage was associated with an increase in smoking prevalence and an increase in smoking ten or more cigarettes per day in the US, as found in a cross-sectional study (Xu, 2013). Finally, a longitudinal study showed that low income was associated with predominant roll-your-own (RYO) tobacco use (which is cheaper) instead of factory-made (FM) cigarette use during the economic recession in the US, United Kingdom, Canada, and Australia (Young et al., 2012). Young smokers (18 to 24 years) experiencing financial stress were disproportionate occasional RYO users and their level of occasional RYO use increased between 2005 and 2008. In 2007 and 2008, RYO smokers in the US were more likely than FM smokers to report that they were experiencing financial stress.

Three individual-level studies found a counter-cyclical relationship. The likelihood of smoking was higher for people with a higher *measured* decline in economic resources in the US (Kalousova & Burgard, 2014), for the elderly population who reported an increase in financial strain in the US (Shaw et al., 2011), and for people reporting greater economic difficulties in Italy and Sicily (Verso & Picciotto, 2014). The first two studies were longitudinal and the last one cross-sectional. Although in one of these studies it was also found that *perceived* decline in individual economic resources was not associated with starting smoking (Kalousova & Burgard, 2014).

Figure 5: Graphical representation of evidence from studies about the income-effect mechanism explaining the relationship between an economic recession and tobacco use.



In sum, there was supportive evidence for the income-effect mechanism for tobacco use. Broadest evidence came from studies that examined individual-level income reductions and associations with tobacco use. Most of these studies found that reductions in individual-level income were associated with reductions in tobacco use (Figure 5), and thus support the income-effect mechanism. Three individual-level studies found the opposite, but it is unclear what the differences in context are in these studies (e.g. some individual-level studies from the US found pro-cyclical effects and others counter-cyclical effects). One study examined substitution behavior and found more switching to cheaper products among individuals with

lower income. Less strong evidence is generated by macro-level studies. One of these was supportive of the income-effect mechanism and the other did not find a relationship between macro-level income and tobacco use.

3A.2.4 Psychological distress and tobacco use

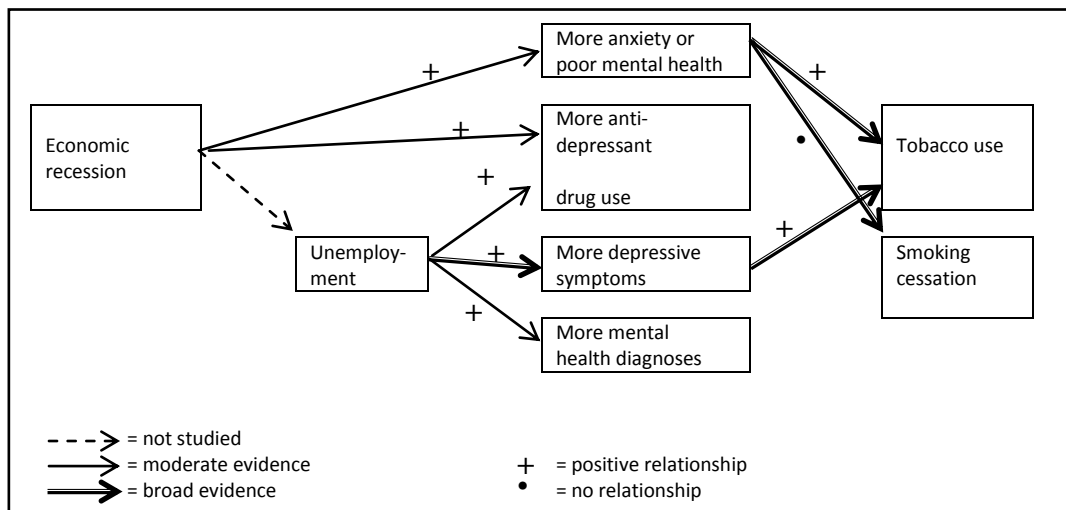
Seven quantitative studies examined psychological distress and tobacco use during an economic recession. Three of those studies assessed the influence of the recession on psychological distress. After the start of the post-2008 economic recession in Italy and Sicily, an increase in antidepressant drug use was observed in a cross-sectional study, which could be taken as a sign of increased distress and mental suffering (Verso & Picciotto, 2014). Antidepressant drug use was higher in Sicily, where there was a larger reduction in jobs, than in Italy. Depressive symptoms were higher among those with many economic difficulties or without a regular job. Also, during the post-2007 Great Recession in the US, rising unemployment rates were associated with an increased likelihood of having a mental health diagnosis in a longitudinal study (McInerney & Mellor, 2012). During the post-2008 economic recession in Belgium, a positive cross-sectional association between unemployment (of the person itself or someone close) and depression was found (Van der Wielen & Vanderoost, 2011). This study did not examine the relationship between depression and tobacco use, but did ask people why they increased their tobacco use. Most respondents mentioned stress as a reason.

Two studies examined the influence of psychological distress on smoking during an economic recession. Dissatisfaction with one's life and reporting frequent mental distress were cross-sectionally associated with more smoking in the US (Jackson et al., 2013). However, adjusting for psychological distress revealed no significant change in effect sizes of the longitudinal association between income change and smoking cessation in Iceland (McClure et al., 2012).

Two studies examined the entire mechanism. After the start of the post-2008 economic recession in Iceland, there was an increase in reports of anxiety or poor mental health in a longitudinal study (Ásgeirsdóttir et al., 2014). Adjusting for anxiety or poor mental health together with four other moderators (hours of work, real household income, financial assets, and having an increase in mortgage debt) revealed a slight reduction in effect size of the association between the recession and smoking rates, but the individual contribution of anxiety or poor mental health was not reported (Ásgeirsdóttir et al., 2014). Among the Hungarian population of 16 years and older, unemployment, financial, and workplace uncertainty was cross-sectionally associated with depression (Kopp & Skrabski, 2000). In turn, depression was associated with more tobacco use.

It thus seems that economic recessions are associated with psychological distress and that psychological distress caused by economic recessions is associated with more tobacco use (Figure 6). However, no study examined whether psychological distress caused by economic recessions has differential effects on smoking among unemployed persons (self-medication) versus employed persons (fear of job loss).

Figure 6: Graphical representation of evidence from studies about the self-medication and fear of job loss mechanisms explaining the relationship between an economic recession and tobacco use.



3A.2.5 Working hours and tobacco use

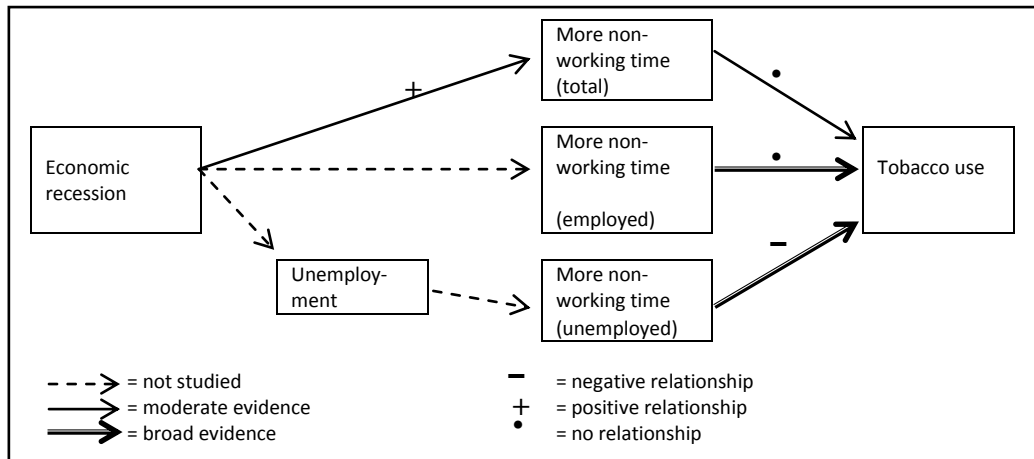
The relationship between working hours and tobacco use during an economic recession was reported in four quantitative studies. Two cross-sectional studies found a pro-cyclical relationship, as predicted by the increased non-working time mechanism (M3). Both of these studies examined the early 1990s recession in the US. Working more hours per week was associated with an increase in smoking (Ruhm, 2005; Xu, 2013) and an increase in smoking ten or more cigarettes per day (Xu, 2013). In the latter study, hours worked per week included the total effect of changes in employment and changes in working hours of those who were employed. Changes in employment seemed to be the primary reason for changes in smoking and not the working hours of those who were employed.

During the post-2007 Great Recession in the US, no longitudinal association between a change in hours worked per week and smoking status was found (Macy et al., 2013). Finally, in Iceland during the post-2008 economic recession, the average hours worked per week decreased after the start of the recession (Ásgeirsdóttir et al., 2014). Adjusting for hours worked per week together with four other moderators (anxiety or poor mental health, real household income, financial assets, and having an increase in mortgage debt) in a longitudinal analysis revealed a slight reduction in effect size of the association between the recession and smoking rates, but the individual contribution of hours worked per week was not reported.

Overall, there was broad evidence from one cross-sectional study for a pro-cyclical effect: people who have more non-working time because they became unemployed during an economic recession used less tobacco (Figure 7). Whether unemployment leads to more non-working time was not studied, but this can be reasonably assumed. However, more non-working time among employed individuals did not lead to a change in tobacco use, and neither were total changes in non-working time associated with tobacco use. Therefore, the pro-cyclical increased non-working time mechanism (M3) can only be partly supported. It is important to note that no studies found a counter-cyclical relationship, which is in line with the fact that tobacco literature describes the pro-cyclical non-working time mechanism (M3, more time for treatment) more often than the counter-cyclical non-working time mechanism (M7, more time for substance use). It is also in line with the prediction by Xu (2013) that the

counter-cyclical mechanism is more relevant for time-intensive activities, such as illegal drug use and alcohol use, than for less time-intensive activities, such as tobacco use.

Figure 7: Graphical representation of evidence from studies about the increased non-working time mechanism explaining the relationship between an economic recession and tobacco use.



3A.3 Alcohol use

De Goeij et al. (2015) included 35 peer-reviewed English language papers about economic recessions and alcohol use that were published between 1990 and 1 May 2014. In our complementary search, we included eight additional peer-reviewed English language papers about economic recessions and alcohol use that were published between 1 May 2014 and 1 May 2015 (Appendix Table A3), two additional non-peer-reviewed English language papers about economic recessions and alcohol use (Appendix Table A5), and four additional non-English language papers (Appendix Table A6). Only two of them were longitudinal survey studies, eleven were cross-sectional survey studies, and one used a combination of a cross-sectional survey and a qualitative study. Ten studies used empirical data from Europe and four from the US.

As can be seen in Table 7, the studies on alcohol use mainly described the mechanisms income-effect (M1) and self-medication (M4). These were also the mechanisms that were most often tested with evidence generated by these studies. No new mechanisms were extracted.

The realist review by De Goeij et al. (2015) found strong empirical evidence to support the income-effect mechanism (M1) and the self-medication mechanism (M4). Support for the income-effect mechanism was found across all countries and in almost all subgroups of the population. When budget constraints were experienced, the volume of alcohol consumption decreased rather than the number of heavy and problematic alcohol users. Use of alcohol as a coping mechanism to deal with psychological distress was found more often in men than in women. Psychological distress in men was associated with an increase in harmful drinking, including alcohol dependence, negative consequences of drinking, binge drinking, hazardous drinking, and intoxication. No strong evidence was found to support other individual mechanisms for the relation between economic recessions and alcohol use. For more information about the findings from this realist review we refer to De Goeij et al. (2015).

Table 7: Number of studies on alcohol use per mechanism, with distinction according to detail of description, coverage of evidence, and study design (n = 35 studies from the published search and n = 14 studies from the complementary search).

Alcohol use	Number of studies in which it is mentioned	Detail of description		Coverage of evidence		Number of studies in which it is tested
		Thin	Thick	Moderate	Broad	
Published search (De Goeij et al., 2015)						
Income-effect (M1)	19	3	16	11	8	19
Self-medication (M4)	22	4	18	11	11	7
Deterioration in social situation (M6)	5	2	3	5	0	3
Increased non-working time (M7)	2	1	1	2	0	1
Complementary search						
Income-effect (M1)	5	1	4	4	1	4
Increased non-working time (M3)	1	1	0	1	0	0
Self-medication (M4)	9	3	6	7	2	5
Deterioration in social situation (M6)	1	0	1	1	0	1
Increased non-working time (M7)	1	0	1	1	0	0

3A.3.1 Pre-post changes in alcohol use

Three cross-sectional studies from our complementary search reported on changes in alcohol use during an economic recession. The consumption of any alcohol in the last two weeks decreased after the start of the post-2008 economic recession among 16 to 24 year old men in Spain, but not among 16 to 24 year old women (Aguilar-Palacio et al., 2015). Another study that was performed before and after the post-2008 economic recession in Spain, found that alcohol use and alcohol dependence increased among primary healthcare patients (Gili et al., 2014). However, these studies could not take into account secular trends, because only two survey waves were used. A repeated cross-sectional survey that could take secular trends into account found a decrease in frequent drinking and an increase in infrequent drinking after the start of the post-2008 economic recession in England (Harhay et al., 2014). When only examining those who reported drinking in the last week, there were declines in the number of drinking days, in binge drinking, and the total units of alcohol consumed on the heaviest drinking day.

These studies give us no information about specific mechanisms and the results were mixed.

3A.3.2 Unemployment and alcohol use

Eleven quantitative studies from our complementary search examined the association between unemployment and alcohol use. Six of them used the macro-level unemployment rate, of which only one was a longitudinal study. These studies found that a higher unemployment rate was associated with less everyday drinking in Europe (Cutler et al., 2015), with a lower annual incidence rate of people who contacted mental health services for alcoholism in Spain (Garcia et al., 2014), with less alcohol consumption out of meals in Italy (Mattei et al., 2014), with less alcohol misuse in the US (Maclean et al., 2015), and with more alcohol use in Hungary (Lackó, 2010). A longitudinal study found that a higher unemployment rate was associated with more alcohol use (any use) among pregnant women in the US (Margerison-Zilko, 2014), although this association was not significant in multivariate analyses.

Five cross-sectional studies used individual-level unemployment status. Unemployment status was associated with more binge drinking among current drinkers during the recession (Harhay et al., 2014), with more heavy alcohol use and alcohol abuse/dependence before, at the start

of, and during the recession (Compton et al., 2014), with more alcohol use among young adults in Serbia (Mirnics, 2004), and with more negative drinking consequences and alcohol dependence symptoms during the recession, although these last associations did not reach significance in multivariate analyses (Murphy et al., 2014). Having never worked was associated with less alcohol consumption (any use in the last two weeks) before and during the recession in Spain among young women, but not among young men (Aguilar-Palacio et al., 2015).

Concluding, studies that examined the association between macro-level unemployment rate and alcohol use found mixed results, while most studies that examined the association between micro-level unemployment status and alcohol use found counter-cyclical relationships.

3A.3.3 Income and alcohol use

Four quantitative cross-sectional studies examined the income-effect (M1) mechanism for alcohol use. Lower GDP per capita was associated with less alcoholism in the region of Asturias in Spain (Garcia et al., 2014), while GDP was not associated with any alcohol measure in Italy (Mattei et al., 2014). People with lower income had a lower risk of binge drinking in England after the start of the recession (Harhay et al., 2014). However, in the US, a counter-cyclical individual relationship was found. People who had trouble paying the rent or mortgage and lost their housing experienced more negative drinking consequences and alcohol dependence symptoms compared to people with stable housing (Murphy et al., 2014).

The predicted pro-cyclical relationship was thus only found in two of the four studies. During the post-2007 Great Recession in the US, there was a counter-cyclical relationship between trouble paying the rent or mortgage and lost housing with alcohol consequences and dependence. And in Italy during the post-2008 economic recession, there was no association between GDP and alcohol use.

3A.3.4 Psychological distress and alcohol use

Five cross-sectional studies examined psychological distress and alcohol use during recessions in Europe. Two studies from Spain found a decrease in the incidence rate of mood disorders (Garcia et al., 2014) and a decrease in mental health problems (Aguilar-Palacio et al., 2015) after the start of the post-2008 economic recession, although the last association was only found for young women and not for young men. Lower GDP per capita in Spain was associated with less mood disorders (Garcia et al., 2014), while unemployment status was associated with a greater risk of mental health problems among young men (Aguilar-Palacio et al., 2015). Additionally, young men had a higher risk of mental health problems when they were unemployed for a longer period. Another study from Spain, however, found significant increases in major depression, dysthymia, generalized anxiety disorders, panic attacks, somatoform disorders, and an increase in the consumption of antidepressants after the start of the post-2008 economic recession (Gili et al., 2014). In Hungary, unemployment, financial, and workplace uncertainty was associated with more depression and depression was associated with more alcohol use (Kopp & Skrabski, 2000).

Irish organizations that provide assistance to unemployed men reported that stress and anxiety are the most significant challenges for men after the start of the post-2008 economic recession (IPH, 2011). Qualitative interviews with men and project staff and volunteers revealed that men increased their alcohol use as a way of coping with unemployment.

In sum, studies that examined whether economic recessions are associated with psychological distress were not entirely consistent, although unemployment was consistently associated with more psychological distress. The two studies that examined whether psychological distress was associated with alcohol use both found positive effects. Supportive evidence for the self-medication (M4) and fear of job loss (M5) mechanisms was mainly found among men.

3A.3.5 Social situation and alcohol use

Only one study examined people's social situation and alcohol use during an economic recession. Qualitative interviews with project workers from Irish organizations that provide assistance to unemployment men revealed that the post-2008 economic recession has individualized men's lives, with alcohol use taking place in more isolated circumstances, usually at home (IPH, 2011). Some project workers thought that increases in alcohol dependency were related to the breakdown of traditional employment structures, which fulfilled a social function for men.

3A.4 Programs and services

Two reports from the European Monitoring Centre for Drugs and Drug Addiction examined drug-related spending after the Post-2007 Great Recession. Public spending on drug-law offenders in prison decreased in 2009 and 2010 in half of the studied European countries (EMCDDA, 2014a). Drug-related spending in general stagnated or decreased in many European countries following the Post-2007 Great Recession (EMCDDA, 2014b). Countries in which there was a larger impact of the recession also experienced a larger decrease in the financing of drug-related initiatives. Other impacts of the recession in Europe were that the amount of public funds for drugs became more difficult to forecast and varied more from one year to the next, which makes it difficult to plan drug initiatives (EMCDDA, 2014b). Additionally, a number of countries changed the balance between more expensive residential and cheaper outpatient treatment.

A study on the Early 2000s crisis (Sosin et al., 2010) and the Post-2007 Great Recession (Levit et al., 2013) in the United States both found a decline in spending and coverage of substance use services. During the Early 2000s crisis, coverage of state substance use programs was narrowed and the focus on particular population groups changed (Sosin et al., 2010). Providers treated clients who were served by other state or federal systems and limited treatment for clients who tended to be the most poor, the single clients, and those who lacked special (funded) problems. Decisions about waitlists, group treatment, or individual treatment were made on financial rather than service grounds. During the Post-2007 Great Recession, the average annual growth in spending on substance use disorders declined from 4.6 percent annually in 2004-2007 to 0.9 percent annually in 2007-2009 (Levit et al., 2013). Also, the proportion of treatment delivered in specialty substance use centers declined. Between 2004 and 2009 the share of spending on treating substance use disorders decreased for outpatient treatment and increased for residential treatment.

Finally, another study from the United States looked at the specific issue of tobacco control spending from the Master Settlement Agreement (compensation paid by the major tobacco manufacturers for costs incurred by tobacco use). State budget shortfalls appeared to have no effect on state spending on tobacco control measures (Sloan et al., 2005).

3B. Results of the client reality check

3B.1 Sample characteristics

The survey of the client reality check study was performed in three different jurisdictions: Catalonia, Poland and England. A total of 180 patients, 60 from each country, attending an addiction treatment facility and having an illegal drug as the primary drug when entering treatment answered the questionnaire. The majority of participants were men (n=132, 74.6%), with a mean age of 35.5 years old (SD=8.6), with at least secondary studies (n=126, 70%). 31.7% (n=57) of the sample lived alone whereas 28.3% (n=51) lived with an adult family member. Only one quarter of the participants lived with a partner (n=48, 26.7%), of which less than half of them lived with children (n=21, 11.7%). Half of the participants were working at the moment of the interview (n=86, 48%), a little less than in 2007 (n=95, 53%).

87.7% (n=157) of the participants were polydrug users. 68.3% (n=123) have been using drugs for more than 10 years and 24.4% (n=44) for 5-10 years. Only 10.5% (n=13) have been using drugs for less than 5 years. Half of the clients interviewed (n=92, 51.6%) were in their first year of treatment in the centre where they were interviewed, while 15.6% (n=28) had been in that centre for more than 5 years. The mean years of addiction treatment is 5.1 years, but there is a considerable variance.

The illegal drug for which most patients began treatment is heroin (n=70, 38.9%), followed by amphetamines (n=32, 17.8%), cannabis (n=30, 16.7%) and cocaine (n=28, 15.6%). The most common drugs used are cannabis (n=129, 76.4%), cocaine (n=108, 64%) and alcohol (n=86, 52.4%). Table 8 shows main drug and other drugs used percentages before crisis and before treatment.

Table 8: Main drugs and other drugs used before recession and before initiating treatment.

	Heroin	Amphet	Cannabis	Cocaine	Opiates	Crack	BZDs	Alcohol
Main drug pre-recession (%)	26.1	13	31.9	22.5	2.9	10.1	-	-
Drugs pre-recession (%)	34.7	31.8	65.5	48.6	6.8	10.1	11	-
Main drugs pre-treatment (%)	38.9	17.8	16.7	15.6	5.6	0.6	-	-
Drugs pre-treatment (%)	46.2	36.2	69.7	52.2	14.1	13.4	16.1	52.4

3B.2.1 Polish sample characteristics

77.2% (n=44) of the participants from Poland were men with a mean age of 30.3 years (SD=5.5). 81.7% (n=49) had, at least, secondary studies and 30% (n=18) higher education. 78% (n=46) were working at the moment of the interview, more than in 2007 when 56% (n=34) were employed. 90% (n=54) of the sample were polydrug users and the main drug for which they began treatment is amphetamine (n=31, 51.7%) followed by cannabis (n=18, 30%). Half of them (n=30, 50%) have been using drugs for more than 10 years. 10% (n=6) of Polish respondents reported the use of new psychoactive drugs and 11.6% (n=7) used mephedrone as another drug used in addition to the main drug at the beginning of the treatment.

3B.2.2 Catalan sample characteristics

71.7% (n=43) of the participants were men with a mean age of 40.7 years old (SD=9.1). 78.3% (n=47) had, at least, secondary studies and 43.3% (n=26) higher education. Half of the sample (n=31, 51.7%) was working at the moment of the interview, less than in 2007, when 70% (n=42) of them were employed. 90% (n=54) of the sample were polydrug users and the main drug for which they began treatment was cocaine (n=24, 40%) followed by heroin (n=20, 33.3%) and cannabis (n=12, 20%). 75% (n=45) of them have been using drugs for more than 10 years.

3B.1.3 English sample characteristics

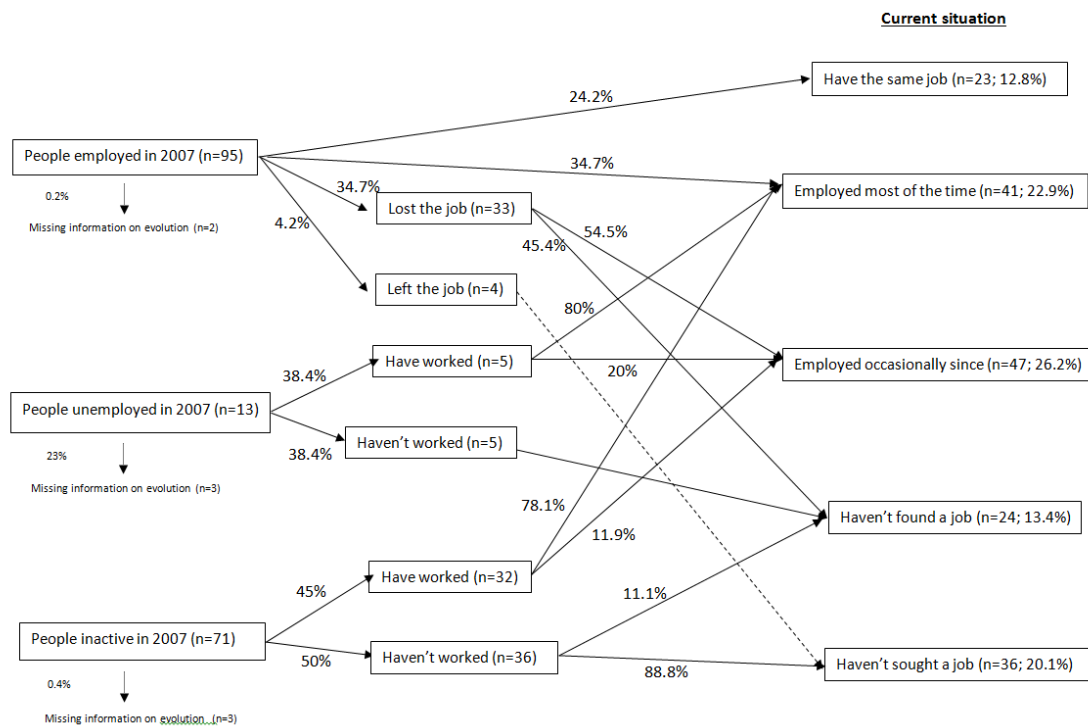
75% (n=45) of the participants were men with a mean age of 35.4 years old (SD=7.6). Half of them (n=30, 50%) had, at least, secondary studies and 10% (n=6) higher education. Only 15% (n=9) were working at the moment of the interview, less than in 2007, when 32.2% (n=19) of them were employed. 83.1% (n=49) of the sample were polydrug users and the main drug for which they began treatment was heroin in the vast majority of cases (n=48, 80%) followed by other opiates (n=8, 13.3%). 68% (n=48) of them have been using drugs for more than 10 years.

3B.2 Changes since austerity

3B.2.1 Perception of impact on oneself's

Figure 8 represents the employment evolution of the sample since 2007.

Figure 8: Employment evolution.



More than half the participants (n=105, 58.3%) increased drug use during the crisis, whereas 16.1% (n=29) didn't modify the amount of drugs they used and 25.6% (n=46) cut down. Table 9 displays a list of possible main reasons for changing drug use pattern, reflecting the different mechanisms identified and tested in this report's literature review. Each participant was asked whether they agreed with each reason as a possible explanation for their particular consumption pattern.

From those who reduced drug use, 46.3% (n=19) compensated by smoking more, 39.5% (n=17) by increasing alcohol use and 5% (n=2) by using other legal drugs.

37.4% (n=67) of all participants stated that their satisfaction with life is better now comparing with before the crisis, whereas 35.8% (n=64) said it was worse.

An important amount of the participants (n=43, 40%) gave other reasons not related to economic recession for increasing drug use. For instance, 12.3% stated addiction as the main reason (n=13, 12.3%) and 9.5% problems related to family and close friends (n=10, 9.5%). 18.6% (n=8) of the clients who reduced drug use did not find any of the reasons for cutting down drug use given in the questionnaire applicable to their personal situation, and provided other reasons such as reducing drug use voluntarily as they wanted to cut down (n=5, 10.8% of those who reduced consumption).

Table 9: Reasons for modifying drug use.

<i>REASONS FOR INCREASING DRUG USE</i>	<i>Strongly agree</i>	<i>Quite strongly agree</i>	<i>Neither agree or disagree</i>	<i>Quite strongly disagree</i>	<i>Strongly disagree</i>	<i>Person states this is not applicable</i>
Seeking comfort or an escape route due to losing a stable source of income (%)	17.1	11.4	4.8	6.7	13.3	46.7
To kill time as they lost a stable source of income (%)	15.2	9.5	5.7	7.6	18.1	43.8
To cope with the loss of a stable source of income and social status (%)	14.4	12.5	3.8	5.8	20.2	43.3
Since I was not working, I had more free time so I increased my drug consumption (%)	22.9	16.2	4.8	3.8	22.9	29.5
To cope with friends and/or family problems (%)	16.2	11.4	9.5	6.7	31.4	23.8
Because of the fear of losing my job (%)	2.9	4.8	5.7	5.7	24.8	56.2
To cope with stress at work (%)	6.7	14.3	2.9	1.9	18.1	56.2
Because I found drugs cheaper (%)	2.9	4.8	7.6	5.7	32.4	46.7
Because they found them easier to get hold of (%)	5.7	18.1	4.8	2.9	24.8	43.8
<i>REASONS FOR NOT MODIFYING DRUG USE</i>						
I cut back and renounced other things but not drugs (%)	10	20	-	3.3	13.3	53.3
Bought alternative cheaper drugs (%)	6.9	6.9	-	13.8	17.2	55.2
Their economic situation stayed more or less the same (%)	57.1	14.3	3.6	14.3	3.6	7.1
<i>REASONS FOR CUTTING DOWN DRUG USE</i>						
As they lost a stable source of money (%)	17.4	15.2	4.3	6.5	19.6	37
To stay clean because I fear losing my job or I need to find one (%)	8.7	8.7	2.2	10.9	19.6	50
To help friends and/or family out with economic difficulties (%)	15.2	13.0	2.2	8.7	39.1	21.7
As they felt less stressed they didn't need to take as many drugs (%)	2.2	8.7	8.7	10.9	23.9	45.7
As they found more time to receive treatment	8.7	6.5	4.3	6.5	21.7	52.2

as I lost my job (%)		
<i>Compensating the reduction by</i>	<i>Yes</i>	<i>No</i>
Increasing alcohol use (%)	39.5	60.5
Smoking more (%)	46.3	53.7
Using other legal drugs (%)	5	95

Note: All participants who increased drug use answered to the first section, those who did not modified it to the second section and those who reduced it to the third section, including the questions on consumption of alternative drugs. Participants answered to each item according to their level of agreement. Interviewees were free to state that a certain statement was not applicable when the sentence did not fit their personal situation (e.g. they did not lose a stable source of income or social status, they do not have more free time available, etc...)

3B.2.1.1 Polish sample

78.3% (n=47) of the respondents increased drug use while 15% (n=9) decreased it. Main reasons given for increasing drug use are more free time available as a result of losing their job (n=15, 25.5%), friends and family economic difficulties (n=6, 12.8%), to cope stress as they lost a stable source of income (n=5, 10.6%), to kill free time as they lost a stable source of income (n=5, 10.6%) and to cope with a loss of social stable source of income and social status (n=5, 10.6%).

Main reasons for decreasing drug use are to help friends and family financially (n=3, 33.3%), a loss of a stable source of income (n=2, 22.2%), and the fear of losing the job (n=2, 22.2%). 66.7% (n=5) of those who reduced drug use compensated by drinking more alcohol and 42.9% (n=3) by smoking more.

A greater share of the participants stated that their satisfaction with life is better now comparing with before the crisis (n=24, 40.7%), whereas 32.2% (n=19) said it was worse.

3B.2.1.2 Catalan sample

46.7% (n=28) of the respondents increased drug use while 31.7% (n=19) decreased it. Main reasons for increasing drug use are more free time available as a result of losing their job (n=9, 32.2%), friends and family with economic difficulties (n=8, 28.6%), to cope with stress as they lost a stable source of income (n=8, 28.6%), to cope with a loss of stable source of income and social status (n=6, 22.2%) and to kill free time as they lost a stable source of income (n=5, 17.8%)

Main reasons for decreasing drug use are a loss of a stable source of income (n=10, 52.6%), to help friends and family financially (n=5, 26.3%), less stress at work (n=4, 21.1%), more time available to receive treatment (n=4, 21%) and the fear of losing their job (n=3, 15.8%). 31.6% (n=6) of those who reduced drug use, compensated by drinking more alcohol and 57.9% (n=11) by smoking more.

45% of the participants stated that their satisfaction with life is better now comparing with before the crisis (n=27, 45%) and 26.7% (n=16) said it was worse.

3B.2.1.3 English sample

Half of the respondents (n=30, 50%) increased drug use while 30% (n=18) decreased it. The main reasons given for increasing use are to cope with stress as they lost a stable source of income (n=17, 66.6%), to kill time as they lost a stable source of income (n=16, 53.3%), to cope with a loss of social stable source of income and social status (n=17, 56.7%), more free time

available as a result of losing their job (n=17, 56.7%) and friends and family economic difficulties (n=15, 50%).

Main reasons for decreasing drug use are to help friends and family financially (n=5, 27.8%), a loss of a stable source of income (n=3, 16.7%), the fear of losing the job (n=3, 16.7%) and more time available to receive treatment (n=2, 11.2%). 33.3% (n=5) of those who reduced drug use compensated by drinking more alcohol and 33.3% (n=5) by smoking more.

Only one out of four English participants stated that their satisfaction with life is better now comparing with before the crisis (n=16, 26.7%), whereas almost half considered their life satisfaction was worse (n=29, 48.3%).

3B.2.2 Perception of impact on society

Half of the respondents (n=89, 50.3%) thought their main drug was easier to get hold of at the time of the survey than before the economic recession. The vast majority of them (n=80, 90.9%) think this is due to an increase of availability in the market and only a third (n=27, 32.9%) think this is due to the price going down. 37.3% (n=66) find no changes in this sense, whereas only 12.4% (n=22) think that their main drug is harder to get hold of, most of them (n=13, 59%) because there is less substance on the market.

73.9% (n=130) of the sample think there are more people affected by addictions since the crisis began. There are no significant differences between the three local samples regarding the perception of impact on society.

3B.2.3 Perception of impact on treatment services

When asked about medical care, the majority of the participants find no changes in the accessibility (n=68, 42.2%) and the quality of health care services (n=68, 43%), but they did report an increase of waiting time between medical appointments (n=68, 45.6%). Similarly, no changes in the accessibility to addiction treatment facilities were perceived.

Regarding to the social services and aid system, only a few of the participants answered this part, as most of the participants stated not to be familiar with economic benefits (n=101, 57.7%) nor social housing (n=110, 61.8%). For those who did state to be familiar with such kinds of social benefits, no changes in the availability of economic benefits (n=32, 18.3%) and less social housing available (n=37, 20.8%) were the most frequent answers.

3B.2.3.1 Polish sample

Most of Polish respondents reported more accessibility (n=22, 44%) and better quality (n=24, 48%) of medical care at the time of the survey in comparison to before the crisis. However, the majority of them thinks that waiting time between medical appointments is longer (n=26, 59.1%). Most of them said they are not familiar with social aids system (n=50-53, 86-89%).

3B.2.3.2 Catalan sample

The greater share of the Catalan clients surveyed think medical care has become less accessible (n=20, 38.5%), although a similar proportion considered there had been no changes throughout this period (n=18, 34.6%). 36.7% (n=18) reported a worsening of the quality of medical care, whereas 37.7% (n=18) considered this had not changed. Most of them (n=20,

44%) finds no changes in the waiting time between medical appointments. Most of them said they are not familiar with social aids system (n=35-45, 60-76%).

3B.2.3.3 English sample

Most of English respondents finds no changes in the level of accessibility to medical care (n=34, 57.6%) neither in the quality of such health care (n=35, 59.3%). Regarding the waiting time between medical appointments 46.7% (n=28) think there are no changes, whereas 43.3% (n=26) think it has become longer. Concerning the social aids system, 40.7% (n=24) find no changes in the availability of economic aids, but 53.3% (n=32) think social housing and shelters have become less available.

3C. Results of the regression analysis

3C.1 Examining raw data

Figure 9 plots mean alcohol deaths per 100,000 adults, mean drug deaths per million adults and mean per cent unemployed per EU country for the years 1990 to 2013. There was a positive relationship between alcohol and drug death rates ($F=11.94$, $p=0.001$). Significant negative relations were found between unemployment and deaths due to alcohol ($F=6.2$, $p=0.013$) and between time (over years) and deaths due to alcohol ($F=7.8$, $p=0.005$). Significant negative relations were found between unemployment ($F=18.9$, $p=0.000$), but not over time (years) ($F=2.98$, $p=0.085$) and deaths due to drugs.

Figure 9: Mean alcohol deaths per 100,000, drug deaths per million, and per cent unemployed per EU country for the years 1990 to 2013.

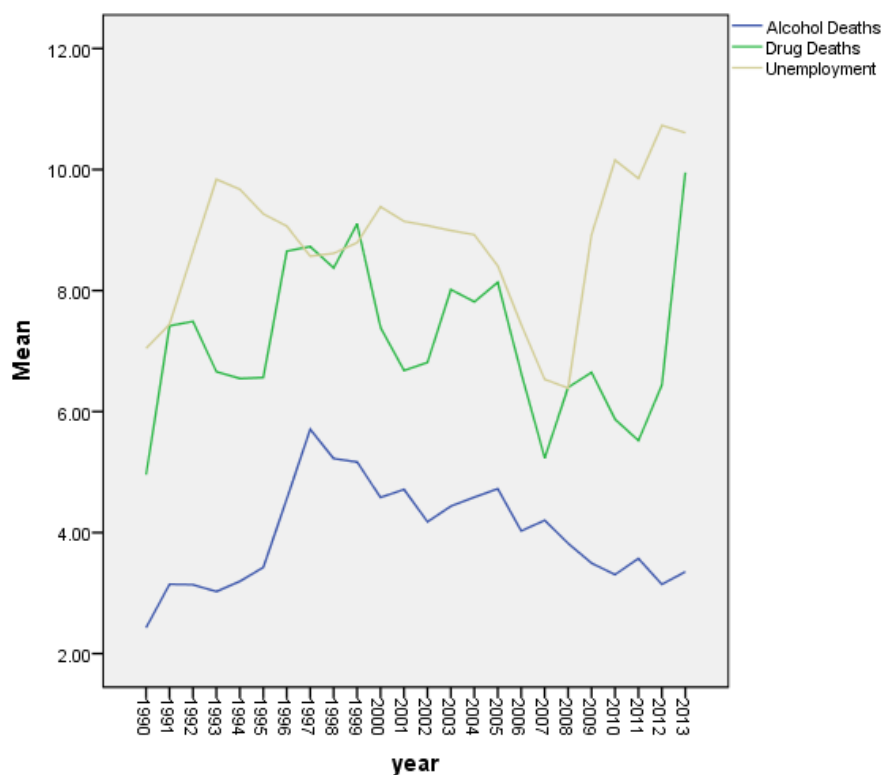
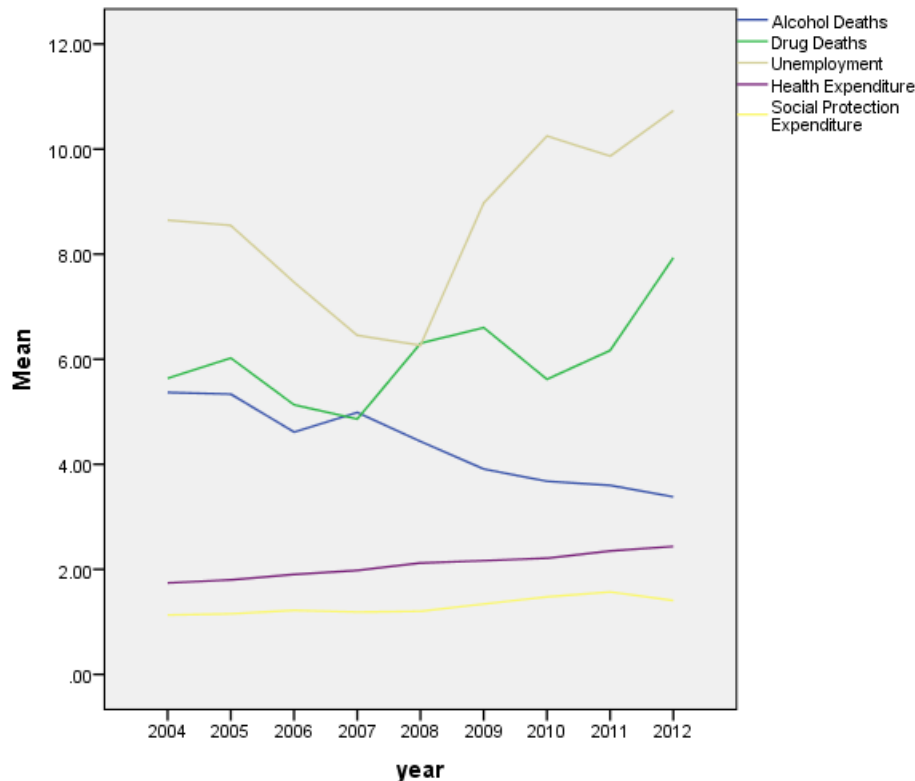


Figure 10 plots means of alcohol deaths per 100,000 adults, drug deaths per million adults, per cent unemployed, expenditure on health per inhabitant (€1000s) and expenditure on social protection (social exclusion costs) per inhabitant (€100s) per EU country for the years 2004 to 2012. Significant negative relations were found between unemployment ($F=5.4$, $p=0.021$) and deaths due to alcohol, but no other factors were related. Significant negative relations were found between unemployment ($F=13.9$, $p=0.000$) and deaths due to drugs, but no other factors were related.

Figure 10: Mean alcohol deaths per 100,000, drug deaths per million, per cent unemployed, expenditure on health per inhabitant (€1000s), and expenditure on social protection per inhabitant (€100s) per EU country for the years 2004 to 2013.



3C.2 Examining year on year changes

With 28 countries and 23 years of change data, there should be 644 data points. When analysing the relationships between changes in unemployment and changes in alcohol deaths, there were 479 valid data points, and with changes in drug deaths, 395 valid data points.

There was a relationship between year on year changes in deaths from alcohol and year on year changes in deaths from drugs. When examining year on year changes in deaths from alcohol, for a 1.0% change in year on year deaths from drugs, year on year changes in deaths from alcohol changed by 0.03% (95% confidence interval = 0.015 to 0.4). Conversely, when examining year on year changes in deaths from drugs, for a 1.0% change in year on year deaths from alcohol, year on year changes in deaths from drugs changed by 0.9% (95% confidence interval = 0.4 to 1.4).

For every year on year 1.0% change in unemployment, alcohol deaths changed inversely by 0.23% (95% confidence interval = 0.05% to 0.39%) ($F=7.8$, $p=0.005$), but drug deaths did not change, 0.04% (95% confidence interval = -0.45% to 0.54%) ($F=0.028$, $p=0.89$). Adding changes in either health expenditure or changes in social protecting expenditure to the model did not change these findings. There was no relationship between changes in health and social protection expenditure and changes in deaths from alcohol or drugs.

A number of sensitivity analyses were undertaken. The following analyses did not change the main findings:

1. When the annual change in unemployment was either more than 1% or more than 3%

2. Dividing the data set into countries with high or low alcohol and drug death rates or into high and low GDP (by median values)
3. Removing potential outliers (where changes in unemployment were more than 50%, or where changes in alcohol deaths were more than 100%, or changes in drug deaths were more than 200%)
4. Analysing countries with full data or with any missing data
5. Adding gini coefficient or year on year changes in the gini coefficient to the model
6. Using changes in per cent employed, rather than change in per cent unemployed (for every 1.0% change in per cent employed, alcohol-related deaths changed by 2.4% (95% CI=0.3 to 4.5), with no change in drug-related deaths).

With the following analyses, the relationship between changes in unemployment and changes in alcohol-related deaths was no longer significant:

1. When the annual change in per cent unemployed was either negative or positive
2. Analysing the period 2008-2013 when unemployment was increasing.

4. Conclusions

This report focused on the impact of economic recessions on substance use, with a focus on illegal drug use. We have performed a systematic literature review of the mechanisms that explain how economic recessions affect substance use. In addition, we performed two smaller studies. A client reality check was undertaken to examine the perspective of drug users receiving treatment in three different jurisdictions. A regression analysis was undertaken to examine the macro-level relationships between economic recessions and deaths from alcohol and drugs using routinely available data for 28 European countries.

4.1 Conclusions from the literature review

In the literature review, we examined 20 primary studies on illegal drug use, 26 studies on tobacco use, and 14 recent studies on alcohol use (35 studies on alcohol were already reviewed by De Goeij et al., 2015). Although all seven mechanisms from our initial theoretical framework (Figure 1, page 10) were described in the primary studies, only a few of them could be supported or rejected with the evidence that was generated by these studies. Some studies examined changes in substance use after an economic recession started. Other studies used state, local, or individual unemployment as determinant and substance use as outcome. These studies give us no information about which specific mechanism is at work, although they can provide some information about relevant contexts in which counter-cyclical or pro-cyclical mechanisms occur. Studies that were more informative about which specific mechanisms are at work measured income (M1), psychological distress (M4 and M5), non-working time (M3 and M7), and social circumstances (M6). The initial theoretical framework with seven mechanisms was refined based on the results from the studies included in our review (Figure 11).

There was supportive evidence that individual budget constraints led to less spending on substances by either lowering the consumption of substances or by buying cheaper products (M1). This evidence was stronger for tobacco use than for illegal drug use. For illegal drug use, it was unclear whether individual budget constraints decreased the consumption of drugs, but there was some evidence that it could increase switching behavior to other substances or different modes of use. For alcohol use, there was strong evidence in the review by De Goeij et al. (2015) that individual budget constraints decreased alcohol consumption. This is in line with previous research that showed that alcohol use decreases after it becomes less affordable (e.g. NICE, 2010). The evidence was more mixed in the studies reviewed in our complementary search.

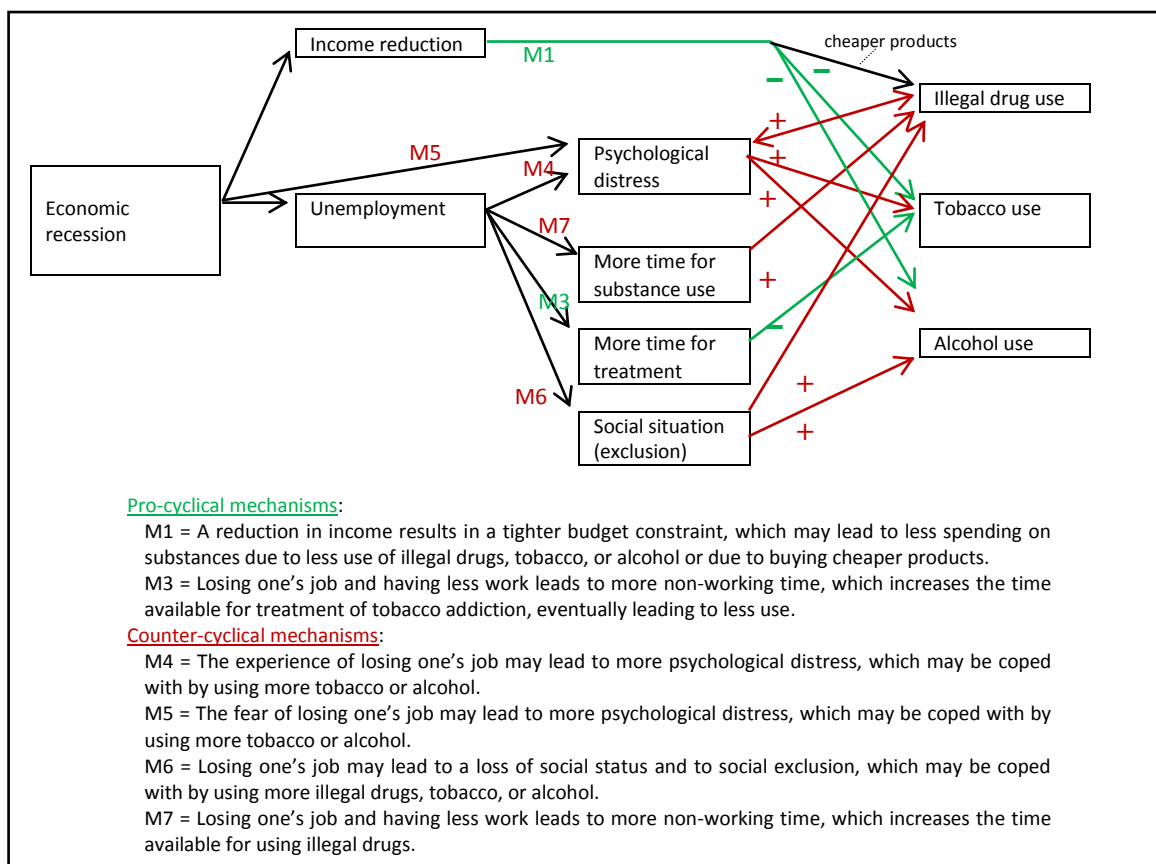
There was sufficient evidence to indicate that either the experience (M4) or the fear (M5) of losing one's job could lead to more psychological distress, which may be coped with by using more illegal drugs, tobacco or alcohol. For illegal drug use, there was stronger evidence that illegal drug use increased psychological distress than vice versa. Supportive evidence for the self-medication and fear of job loss mechanisms in relation to alcohol use was mainly found among men.

Both a pro-cyclical (M3) and a counter-cyclical (M7) non-working time mechanism was part of our initial theoretical framework. The pro-cyclical mechanism posed that people have more time for treatment due to an economic recession and was mostly described in tobacco literature. The counter-cyclical mechanism posed that people have more time for substance use, and this mechanism was mostly described in illegal drug use literature. Our findings were

in line with the hypothesis that the pro-cyclical non-working time mechanism was more applicable to tobacco use and the counter-cyclical mechanism was more applicable to illegal drug use. However, for tobacco use the mechanism was only partly supported. Few studies about alcohol use measured non-working time and those that did found mixed results (De Goeij et al., 2015). Thus, evidence on the non-working time mechanisms is inconclusive for tobacco and alcohol use. For illegal drug use, we also found that using some types of drugs is difficult in combination with a job, and drug use could thus lead to unemployment.

One study about illegal drug use and one study about alcohol use from our complementary search found supportive evidence for the expectation that losing one's job leads to a loss of social status and to social exclusion, which may be coped with by using more substances (M6). The same was found in the review by De Goeij et al. (2015), but the evidence was rated as moderate in quality and it was therefore concluded that there was no strong evidence to support this mechanism. More research is needed that examines this mechanism with evidence that is broad in quality before strong conclusions can be drawn.

Figure 11: Refined theoretical framework.



As can be seen in Figure 11, counter-cyclical mechanisms dominated for illegal drug use, while both counter- and pro-cyclical mechanisms explained the relationship between economic recessions and tobacco and alcohol use. This was confirmed by studies that did not test the mechanisms but only described changes in substance use after an economic recession started or studies that only described the relationship between unemployment and substance use (Table 10). A possible explanation for the difference between substances is that (illicit) drug use is an illegal activity, while tobacco and alcohol use are legal activities. For people who already engage in illegal activities, budget constraints may not withhold them from buying

substances with money obtained from other illegal activities (e.g. stealing money or selling drugs). Additionally, drug use is more difficult to combine with having a fulltime job than tobacco and (moderate) alcohol use.

Because of limited available evidence on subgroup differences, it is difficult to draw strong conclusions about contexts, settings, subgroups, and different types of illegal drugs in which results differ from each other. One notable subgroup difference found in two studies was that unemployment was often related to more use of illegal drugs and tobacco during economic recessions, except among people in their late 30s and 40s (Table 10). A possible explanation is that this age group has more financial commitments than younger age groups and that this group more often has young children as opposed to older age groups. Therefore, using less illegal drugs and tobacco when becoming unemployed will be more likely for this age group.

Another notable subgroup difference was that supportive evidence for the self-medication and fear of job loss mechanisms in relation to alcohol use was mainly found among men. This was found in the previously published review (De Goeij et al., 2015) and in our complementary search. Therefore, alcohol use among men should be closely monitored during economic recessions.

Table 10: Summary of main findings from the literature review.

	Illegal drug use (20 studies)	Tobacco use (27 studies)	Alcohol use (14 studies)
Pre-post changes	Studies found counter-cyclical patterns or no changes in drug use after the start of an economic recession.	Pro-cyclical relationship in Iceland and Ukraine during the post-2008 economic recession, counter-cyclical or no relationship in the US.	Pro-cyclical relationship among 16-24 year old men in Spain and among the 20-26 year old population in England. Counter-cyclical relationship among primary healthcare patients in Spain.
Unemployment	Counter-cyclical relationships, except people in their late 30s and 40s in Australia, patients of a general practice in Belgium, and use of hypnotics/sedatives in Spain.	Mixed findings for macro-level unemployment. Mostly counter-cyclical relationships for micro-level unemployment, except people aged 37 to 50 years from the US and people from Iceland.	Macro-level studies found mixed results, while most micro-level studies found counter-cyclical relationships.
Income (M1)	Unclear whether individual budget constraints decreased the consumption of drugs, but there was some evidence that it increased switching behavior.	Supportive evidence that individual budget constraints reduce tobacco use and lead to switching to cheaper products.	The predicted pro-cyclical relationship was found in two of the four studies.
Psychological distress (M4, M5)	Supportive evidence that unemployment, psychological distress, and drug use are positively associated, but it may not be a simple linear process. There is stronger evidence that illegal drug use increases psychological distress than vice versa.	Supportive evidence that economic recessions cause psychological distress, and psychological distress is associated with more tobacco use.	Consistent evidence that unemployment is associated with more psychological distress. Psychological distress was associated with more alcohol use (examined in two studies). Supportive evidence for the psychological distress mechanisms was mainly found among men.
Working hours (M3, M7)	Broad supportive evidence for the counter-cyclical increased non-working time mechanism (M7).	The pro-cyclical increased non-working time mechanism (M3) was partly supported.	Not studied.
Social situation (M6)	Evidence that informal control, social support, and networks of peers who are not doing drugs at work inhibit drug use (examined in one study).	Not studied.	Evidence that alcohol use took place in more isolated circumstances after the recession and that increases in alcohol dependency were related to the changing social relationships (examined in one study).
Job chances (M2)	Not studied.	Not studied.	Not studied.

Two new mechanisms emerged from the studied literature. The decreased job chances mechanism (M8) states that during an economic recession the ‘payoff’ of quitting substance use is lower than before the recession because the substance user has a low probability of finding a job after treatment and therefore use increases. The lower interest in health mechanism (M9) states that an economic recession may lead to somber expectations about the future, which may be coupled with lower consumer interest in future health status and more use of substances. However, these mechanisms were both described in only one study and they were not tested with evidence generated by the primary studies in this review. Therefore, they are not incorporated in the summary Figure (11) and Table (10) in this conclusion. We cannot draw conclusions on these mechanisms, but they provide useful directions for future empirical work.

There was little empirical evidence available about the extent to which economic recessions impact on resourcing substance use prevention programs and substance use treatment services. The studies that we identified that did examine this found a stagnation or decrease of resources for drug-related services in Europe and a decrease of resources for substance use services in the United States. This may be another mechanism through which economic recessions increase substance use. Additionally, the type of treatment and populations served changed after the start of economic recessions. We found no evidence about policies and programs that may be able to mitigate any negative impact of economic recessions on substance use. More research is needed in this area.

4.2 Limitations of the literature review

A realist literature review can be very useful for synthesizing methodologically diverse empirical studies on complex phenomena. Nevertheless, our review is limited by the empirical studies that were available on the relationships between economic recessions and substance use and by the specific choices that we made during the review process.

The main limitation of the empirical studies that we reviewed was that the studies did not generate sufficient evidence to support or reject the mechanisms that they described. Three of the nine mechanisms that were described were not tested in any of the included studies. The studies did not measure people’s perceptions of their chances of holding on to or getting a job (M2), people’s perceptions of the payoff of quitting substance use and their job chances (M8), or people’s expectations about the future and their interest in future health status (M9). For the other mechanisms, most studies did not generate ‘broad’ evidence that could support or reject the *entire* mechanism. For example, studies reported on the impact of the economic recession (or unemployment) on psychological distress or they reported on the impact of psychological distress during an economic recession on substance use, but most studies did not analyze both parts of the mechanism in the same context. Also, between 77% (for tobacco) and 90% (for alcohol) of the studies examined only one mechanism, instead of correcting for multiple mechanisms. Of course some of these data limitations are caused by the fact that existing datasets need to be used to examine the impact of economic recessions. A dedicated survey with a pre-recession measurement wave is very difficult to accomplish because it is always unknown when an economic recession will start.

Another limitation of the empirical studies that we reviewed was that subgroup differences were not reported in most of the studies. These differences are relevant when considering interventions to reduce possible negative effects of economic recessions on substance use. For example, an intervention that needs to focus on young highly educated women will be very

different than an intervention for middle-aged low educated men. Similarly, the studies that we reviewed did not always distinguish between different substance use outcomes. This made it difficult to draw conclusions about, for example, whether unemployment was related to smoking initiation, quit smoking attempts, abstinence, or quantity. Therefore, we recommend future studies to examine and report differences across subgroups and outcome variables.

An important challenge concerns the use of aggregate versus individual-level indicators. Both types of indicators have their value. People living in different social or economic situations (actual GDP) will respond in diverse ways in their use of substances to economic realities. Living in an affluent environment could evoke different emotions and responses to job loss than living in a poor neighborhood. Likewise, job loss in a region with a high level of unemployment may make people react in quite different ways, compared to a region in which job chances are still pretty good. The interaction between aggregate- and individual-level parameters was only examined in one of the studies that we included in our review (Herzfeld et al., 2014). Future work should try to incorporate micro-level change in relation to macro-level parameters.

We aimed to focus our review on how economic recessions affect illegal drug use. However, because little empirical evidence was available, we broadened our focus to tobacco use and alcohol use and to studies about illegal drug use that were outside the context of an economic recession. It is possible that mechanisms work differently for illegal and legal drugs and during an economic recession versus better economic times (Ritter & Chalmers, 2011). Thus, our attempt to apply one theoretical framework to all this literature should be interpreted with caution. Results that have been found for tobacco or alcohol use cannot necessarily be applied to illegal drug use and results that have been found outside the context of an economic recession cannot necessarily be applied to the context of an economic recession. We examined the literature for illegal drugs, tobacco, and alcohol separately, while many illegal drug users also use tobacco and alcohol and most smokers use alcohol. Poly substance use is a reality for many people. Additionally, an economic recession may lead substance users to switch from one substance to another. This has not been examined in the primary studies and could thus not be taken into account in our review.

Due to time constraints, selection and extraction of primary studies were only done by the first author and were not checked by a second coder. Interpretation of the data was, however, discussed with the other authors. We are currently working on academic papers based on this report in which we do select and extract the primary studies with two coders.

Finally, we limited our analyses to individual-level mechanisms, while there are also mechanisms on the population-level. For example, prices of illegal drugs may decline during an economic recession, which may lead to more consumption of illegal drugs (Dubanowicz & Lemmens, 2015; Bretteville-Jensen, 2011). Additionally, the physical availability of illegal drugs may increase during an economic recession, due to more people selling drugs, which may lead to more consumption of illegal drugs (Bretteville-Jensen, 2011). In our review, we have interpreted these population-level mechanisms as contexts for individual-level mechanisms, but we found only two studies from Argentina that described the broader population-level context of prices, availability, and quality of drugs (Epele, 2010; 2011). A systematic literature review of evidence for these population-level mechanisms may thus further increase our understanding of how economic recessions affect substance use. Such a review would include, for example, studies from Eastern Europe during the early 1990s transition and recession that have shown that alcohol consumption increased when alcohol became more affordable and available (Moskalewicz & Simpura, 2000). Although the previous realist review on alcohol use

(De Goeij et al., 2015) described some of these studies from Eastern Europe, they were outside the scope of the current review.

4.3 Conclusions from the client reality check

The majority of participants are men ($n=132$, 74.6%), between 25 and 44 years old ($n=131$, 73.9%), with at least secondary studies ($n=126$, 70%). Other studies, such as that of the European Monitoring Center for Drugs and Drug Addiction (EMCDDA) showed that, on average, 60% of drug users starting treatment have completed secondary studies (EMCDDA, 2010). The three samples have similar gender proportions and mean ages, but English respondents have a lower rate of secondary and higher education. Half of them did not complete secondary studies.

87.7% ($n=157$) of the participants are polydrug users, and there is an important heterogeneity in the substances used. The main illegal drug for which patients began treatment is heroin ($n=70$, 38.9%). 68.3% ($n=123$) of the patients have been using drugs for more than 10 years, and the mean years of addiction treatment is 5.1 years, but there is a large variance in this duration. We found similar rates of polydrug users in the different local samples. However, there are important differences in drugs used and drug use duration. The main substances used by Polish respondents are amphetamine ($n=31$, 51.7%) and cannabis ($n=18$, 30%) and half of them have been using drugs for more than 10 years. It is interesting to remark that 10% ($n=6$) of Polish respondents reported the use of new psychoactive drugs and 11.6% ($n=7$) use mephedrone as another drug used besides their main drug at the beginning of treatment. Recently, there has been an increase in the number of new psychoactive drugs in Europe. The most frequently detected are synthetic cannabinoids and cathinones (Papaseit et al., 2014). The Catalan sample is the most heterogeneous and the main drugs used are cocaine ($n=24$, 40%), heroine ($n=20$, 33.3%) and cannabis ($n=12$, 20%). Three out of four Catalan participants have been using drugs for more than 10 years. On the other hand, the vast majority of English respondents are opioid users ($n=56$, 93.3%), mainly heroin ($n=48$, 80%), and the vast majority have been using drugs for more than 10 years. This seems important, as opioid addicts have a different profile and opioid dependence may lead to higher morbidity and different outcomes.

The majority of the participants ($n=105$, 58.3%) increased drug use during the crisis, although 25.6% cut down the amount of drugs they used. In all jurisdictions, most of the patients reported an increase in substance use during the crisis; Poland is the region where a higher percentage of people reported an increase in substance use ($n=47$, 78%), in contrast to just a half of the English participants ($n=30$, 50%). Catalan and English sample have similar rates of people that reduced drug use, around 30%, while in Poland, only 15% reported a decrease in their level of substance use ($n=9$).

The level of employment of the sample has decreased slightly during the crisis. Almost half of the participants were working at the moment of the interview ($n=86$, 48%), a little less than in 2007 ($n=95$, 53%). Unemployment rate is known to be higher in drug users than non drug users (Sumnall et al., 2011, National Survey on Drug Use and Health, 2014), and our results seem to point in this direction, particularly in the English sample, where only 15% ($n=9$) were working at the moment of the interview. The current research provides evidence that job loss and unemployment are a risk factor of substance use (Henkel, 2011).

Employment status in 2007 does not predict employment evolution during the crisis, as employment changes have been very common. Only one quarter of the people employed in

2007 have the same job. From those who were unemployed or inactive in 2007, half of them have worked since. 30 % (n=60) have not worked during this period.

Employment rates and evolution differ in each jurisdiction. Poland is the only country from the study where there has been an increase in the level of employment from 50% to 78% of the interviewees. Half of the participants from Catalonia were working at the moment of the interview while the corresponding figure for England was just 15%. The UK is the country with the smallest unemployment rate of the three jurisdictions here studied (www.tradingeconomics.com), nonetheless, English drug users from our study have the highest level of unemployment. This may be due to the different sociodemographic characteristics of the English clients receiving treatment in the addiction facilities in this study, such as a lower educational level and a different drug use profile. Employment status is considered as an important predictor of treatment outcome (Richardson et al., 2010); it seems clear that unemployment increases relapse risk, while being employed prevents it (Henkel, 2011). For this reason, many rehabilitation programs include interventions to achieve paid employment through educational programs (Klee et al., 2002).

As reported in the literature review included in this report, there have been several studies investigating how economic recession affects drug use. It seems clear that there are many factors that influence substance use in opposite directions. More psychological distress and economic restrictions are the behavioural mechanisms supported by more evidence (De Goeij et al., 2015). Looking into reasons for an increased illegal drug use, besides increased psychological distress, the clients interviewed in this reality check reported other factors related to economic recession that can lead to increasing drug use. Having more free time as a result of unemployment was the main reason given by people that increased drug use. This supports the “non-working time theory”, which explains increases in drug use as a way to kill free time (Khantzian, 1985). Psychological distress was the second most important reason and the main factors for increasing distress were the loss of a stable source of income, economic difficulties of friends and family and more stress at work. In accordance with the “self-medication theory” these patients would increase drug use to reduce anxiety and stress (Khantzian, 1985). Finally, increased drug availability seemed to clients as another reason for increasing substance use. The fear of losing a job and drug price reduction are less significant reasons for increasing drug use according to this client reality check. Main reasons given for increasing drug use are similar in the three samples. However, most of Catalan and Polish respondents increased substance use for other reasons not specified in the questionnaire, as could be the loss of a close relative or an increasing addiction to illegal drugs.

In accordance to the review by De Goeij, we found economic restriction as the main reason for decreasing substance use. This mechanism has been observed in many economic fluctuations, particularly regarding alcohol consumption. Several studies indicate that alcohol use and smoking vary procyclically and decreases during economic recessions (Chalmers & Ritter, 2011; Herttua et al., 2007). Most of the participants from our study who reduced drug use during the crisis adduced economic difficulties, either oneself’s or that of friends and family, as the main reason. The majority of respondents of each sample gave similar reasons. 46.3% of the clients surveyed who lowered their level of consumption during the crisis compensated drug use reduction by increasing alcohol use and 39.4% by smoking more. Due to the small sample size, separate analysis of each sample is not relevant in this case.

It is important to remark that an important amount of the participants (n=43, 40%) gave other reasons not related to economic recession for increasing drug use. This may explain why there is such an important percentage of “Person states this is not applicable” in many of the

reasons for modifying drug use. 12.3% stated addiction (n=13, 12.3%) and 9.5% problems related to family and close friends (n=10, 9.5%) as the main reasons for increasing drug use. In turn, 18.6% (n=8) of the clients who reduced drug use did not find any of the reasons for cutting down drug use given in the questionnaire applicable to their personal situation, but rather provided other reasons such as reducing drug use voluntarily as they wanted to cut down (n=5, 10.8% of those who reduced consumption).

Half of the participants claimed to find their main illegal drug easier to get hold of in 2015/2016 than before the recent economic recession; the vast majority thinks this is due to an increased availability of such substances. Only a third of them considered that the drug price went down over this period. These results contrast with the findings of most studies looking into this issue, which report a decline in drug prices during economic recession (Bretteville-Jensen, 2011). Numerous studies and a review have studied this phenomenon, identifying several factors that could take part. According to these studies, a decline in drug prices together with increased drug availability are to be expected during economic crises. Economic recession can reduce production and distribution costs as lower salaries and unemployment can increase number of people willing to participate in illegal activities such as drug dealing. Consequently, increasing competition may lead to drug price reduction (Stolzenberg & D'Alessio, 2003). Moreover, decreasing investments in law enforcement can facilitate drug business and increase business efficiency (Caulkins & Reuter, 2010).

Concerning the perception of the impact of the recent economic recession on public services and benefits such as health care, addiction treatment facilities or social aids, most of the patients see no changes in the accessibility or the quality of medical care, but almost half of them think that waiting times have increased. Similar results are found for addiction treatment facilities. When analyzing each jurisdiction separately some differences appear: most of the Polish are satisfied with medical care, a greater share of English participants finds no changes in medical care, whereas in Catalonia the majority of the respondents think accessibility and quality have worsened.. The overall results of the survey show that most of the drug users attending addiction treatment facilities are not familiar with social aids, such as economic aids and social housing. However, most of the English sample respondents are familiar with these aids, considering there have been no changes in economic aids, but a decline in the availability of social housing between 2007/08 and 2015/16.

4.4 Limitations of the client reality check

The client reality check presented some limitations. First, this is an observational and cross-sectional study, with data reported by patients retrospectively; therefore, there is no way to verify any possible deviances between real events and how they are remembered by the interviewees. The sample is a convenience one, small in size and containing different patient profiles, making it difficult to perform further detailed analysis within sub-groups due to lack of statistical power. These limitations should be borne in mind when interpreting the results, also considering that the results correspond only to problems users who are receiving treatment and not to people who consume illegal drugs for recreational purposes; therefore, findings can not be extended to the whole population of illegal drug users. This may explain divergences with other studies. Moreover, these patients are receiving treatment, and consequently, may have modified drug use due to the effects of such treatment or other reasons not controlled. Finally, it should be noted that the results from this study come from patient's opinions and perceptions, so the information can be biased by many factors.

4.5 Conclusions from the regression analysis

In the regression analyses, we have taken routinely available data for 28 European Union countries to explore the relationships between economic recessions and alcohol and illegal drug use. We used unemployment as our indicator of economic recession, the independent variable. We wanted the same outcome (dependent) variables for alcohol and drug use. We had hoped to use survey data, but for most countries, this is not available on an annual basis, and so cannot be used. Instead, we used mortality data from the WHO Health For All (HFA) database. We also investigated if key factors might modify the relationships between unemployment and deaths from alcohol and drugs. We used two factors: expenditure on health care; and, expenditure on social protection.

Examining changes from one year to the next found inverse associations between annual changes in unemployment and annual changes in deaths from alcohol. No relationships were found between annual changes in unemployment and annual changes in deaths from drugs. A range of sensitivity analyses did not change these findings. For every 1% relative increase in unemployment from one year to the next, alcohol-related deaths decreased relatively by 0.23% from one year to the next.

4.6 Limitations of the regression analysis

The main difficulty with the regression analysis is missing data. With 28 countries and 23 years of change data, there should be 644 data points. When analysing the relationships between changes in unemployment and changes in alcohol deaths, there were 479 valid data points, and with changes in drug deaths, 395 valid data points. There were 117 missing data points for unemployment, 81 missing data points for alcohol deaths and 73 missing data points for drug deaths.

4.7 Vulnerable groups

Economic recessions are typically followed by austerity measures affecting many areas of health and health care, including services for prevention, early detection, and cure of mental health problems and addictions (Van Hal, 2015). On a conference on health systems and the economic recession in 2013, the World Health Organization Regional Director for Europe Zsuzsanna Jakab recommended European governments: “if you have to cut, cut wisely, not broadly” (WHO, 2013). She urged governments to protect the vulnerable to ensure universal health coverage in times of economic recession. Others, such as the Norwegian Minister of Health, also expressed their concern that cost-cutting measures in the health sector should not increase socioeconomic inequalities in health (WHO, 2013).

Low socioeconomic status (SES) individuals may be more likely to switch to cheaper or lower quality products and not use fewer substances when confronted by an economic recession. It has been reported that lower SES smokers, for example, use more price minimizing behaviors (e.g. buying discount brands and switching to roll-your-own tobacco) than high SES smokers (Licht et al., 2011). Also, low SES individuals already experience more psychological distress than high SES individuals (Kessler, 1982). When the stress or fear of job loss is added to this, they may be inclined to use more substances to cope with all the stress, despite their tight budget. Therefore, it is possible that SES inequalities in mental health, substance use, and mortality increase during an economic recession.

4.8 Overall conclusion and recommendations

Both the findings from the literature review and the client reality check suggest that *illegal drug use* may increase after the start of and during an economic recession. Possible mechanisms are an increase in psychological distress and an increase in non-working time after people lose their job. Both can lead to an increase in illegal drug use.

The dominant mechanism for *alcohol use*, that was found in all population subgroups in all countries in a previous literature review, was a decrease in income after the start of an economic recession, which can lead to a decrease in alcohol use. This was in line with the main finding from the regression analysis of macro-level data from 28 European countries, in which we found that increases in unemployment were associated with a reduction in deaths from alcohol.

For *tobacco use*, there was supportive evidence in the literature review that individual budget constraints led to less spending on tobacco by either lowering the consumption or by buying cheaper tobacco. There was also sufficient evidence to indicate that either the experience or the fear of losing one's job could lead to more psychological distress, which may be coped with by using more tobacco. The pro-cyclical mechanism that people have more time for smoking cessation treatment due to an economic recession was partly supported. Thus, for tobacco use, both mechanisms that increased and decreased use were present.

A possible explanation for the difference in findings between illegal drug use, alcohol use, and tobacco use may be that illicit drug use is an illegal activity, while tobacco and alcohol use are legal activities. For people who already engage in illegal activities, budget constraints may not withhold them from buying substances with money obtained from other illegal activities. And thus there is no mechanism that decreases illegal drug use during times of economic recession.

We have quite a few recommendations for research, as we found many areas in which research on the impact of economic recessions on substance use is lacking. Our most important recommendations for future research are:

- Future research should examine individual-level mechanisms that have been hypothesized to partly explain the impact of economic recessions on substance use, but have not been studied with empirical data. This concerns the social situation mechanism, the decreased job chances mechanism, and the lower interest in health mechanism.
- Future research should report on subgroup differences when examining the impact of economic recessions on substance use (looking for instance at possible differences between recreational users and problems users, or groups from different socioeconomic status). Similarly, studies should distinguish between different substance use outcomes (e.g. initiation, cessation, or reduction, or use of different types of illegal drugs). These results are relevant when considering interventions to reduce possible negative effects of economic recessions on substance use.
- Studies on the impact of economic recessions on the use of new psychoactive drugs or designer drugs are needed.
- A literature review of evidence for population-level mechanisms could increase our understanding of how economic recessions affect substance use beyond our literature review on individual-level mechanisms.
- More research about the extent to which economic recessions impact on resourcing substance use prevention programs and substance use treatment services and on policies and programs that may be able to mitigate any negative impact of economic recessions on substance use is needed.
- An important challenge in research concerns the use of aggregate versus individual-level indicators. We have examined aggregate changes and individual-level mechanisms in

separate studies. Future work should try to incorporate micro-level change in relation to macro-level parameters.

- Aggregate data on unemployment and drugs- and alcohol-related mortality should be routinely collected without missing data. Additionally, survey data on use of illegal drugs and alcohol should ideally be collected on a yearly basis.

Because of the above described gaps in research, it is difficult to formulate evidence-based recommendations for practice. A few recommendations are, however, obvious:

- Social policies to promote employment and treat psychological distress in drug users should be warranted, particularly during an economic recession.
- Health professionals should be mindful of the risk of increased alcohol use among men due to increased psychological distress during an economic recession.
- Patients in addiction treatment should be made aware of social aids when these are available in their local context, such as economic aids and social housing. Results from the client reality check suggested that patients were not familiar with such services or aids, but it should be noted that these results may not be representative of all patients in addiction treatment.
- Vulnerable groups, such as people with a low socio-economic status, should be protected to ensure universal health coverage in times of economic recession and cost-cutting measures in the health sector should not increase socioeconomic inequalities in health.

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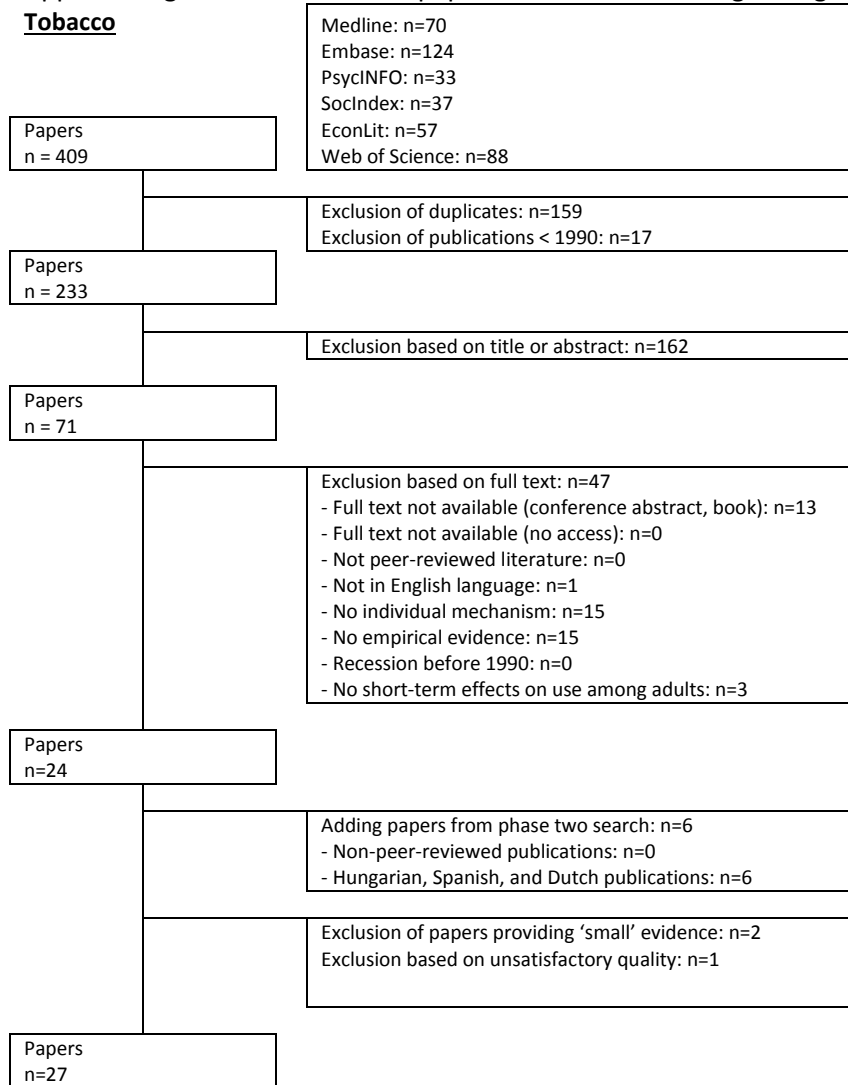
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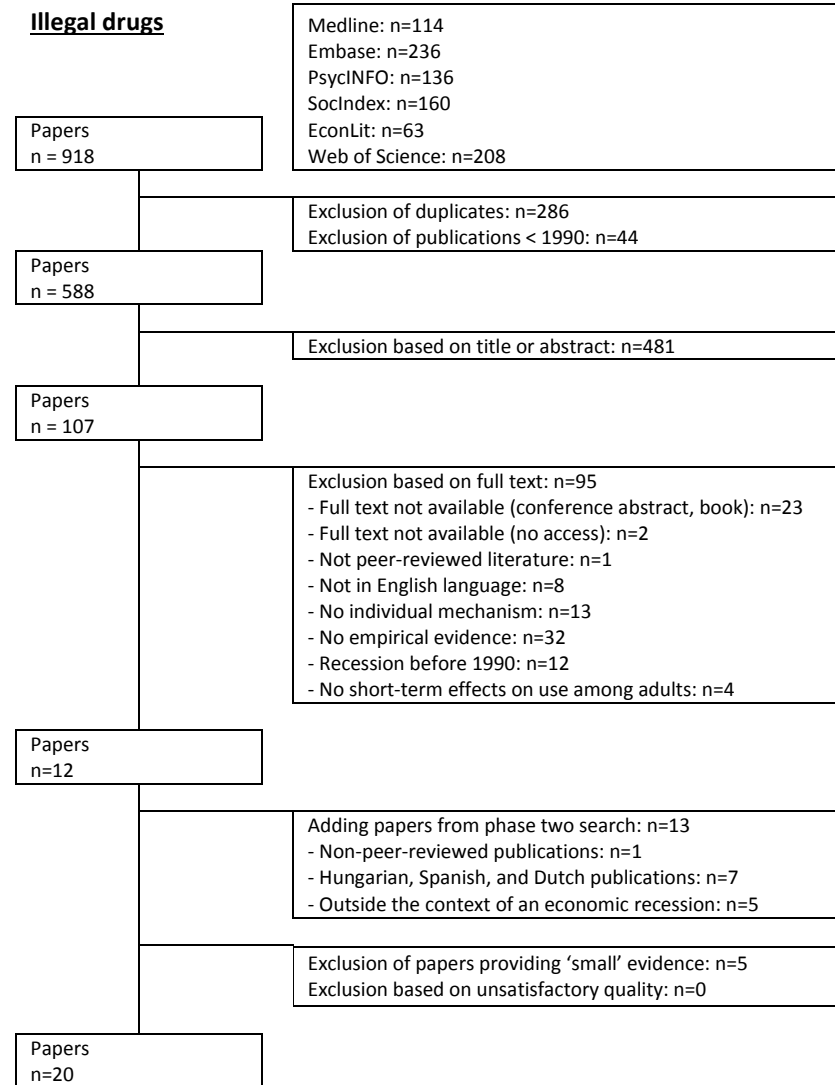
6. Appendix literature review

Appendix Figure A1: Selection of papers on tobacco and illegal drugs.

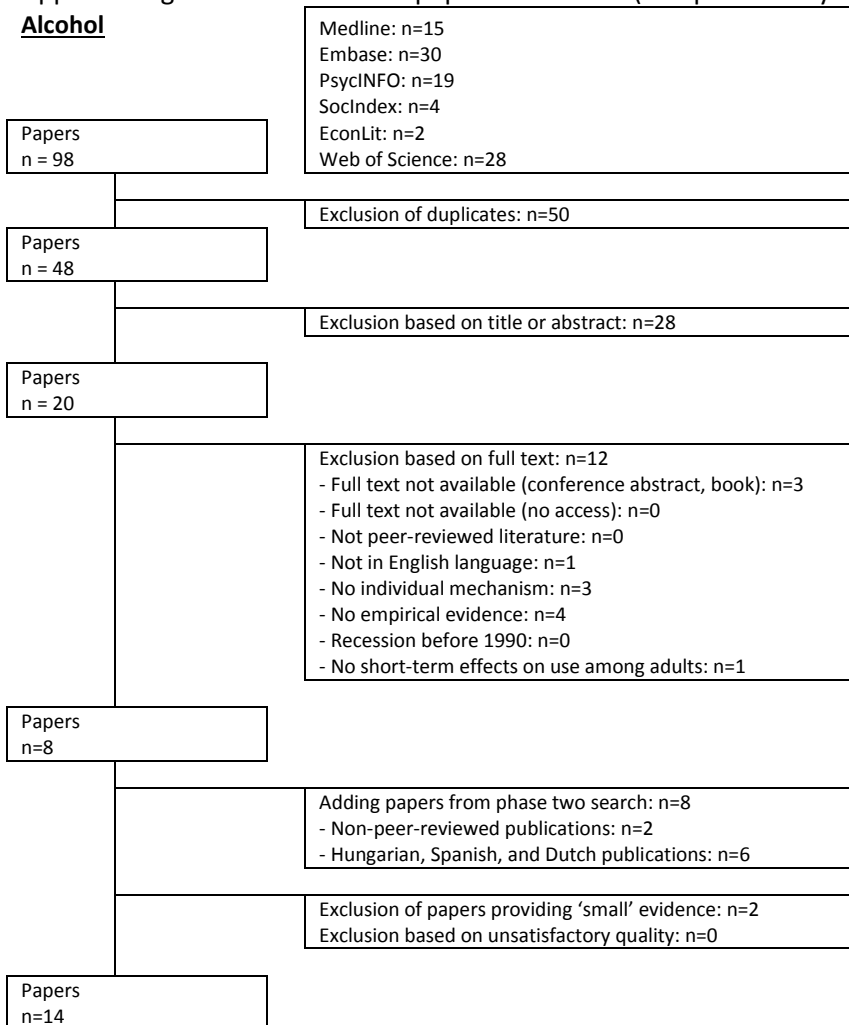
Tobacco



Illegal drugs

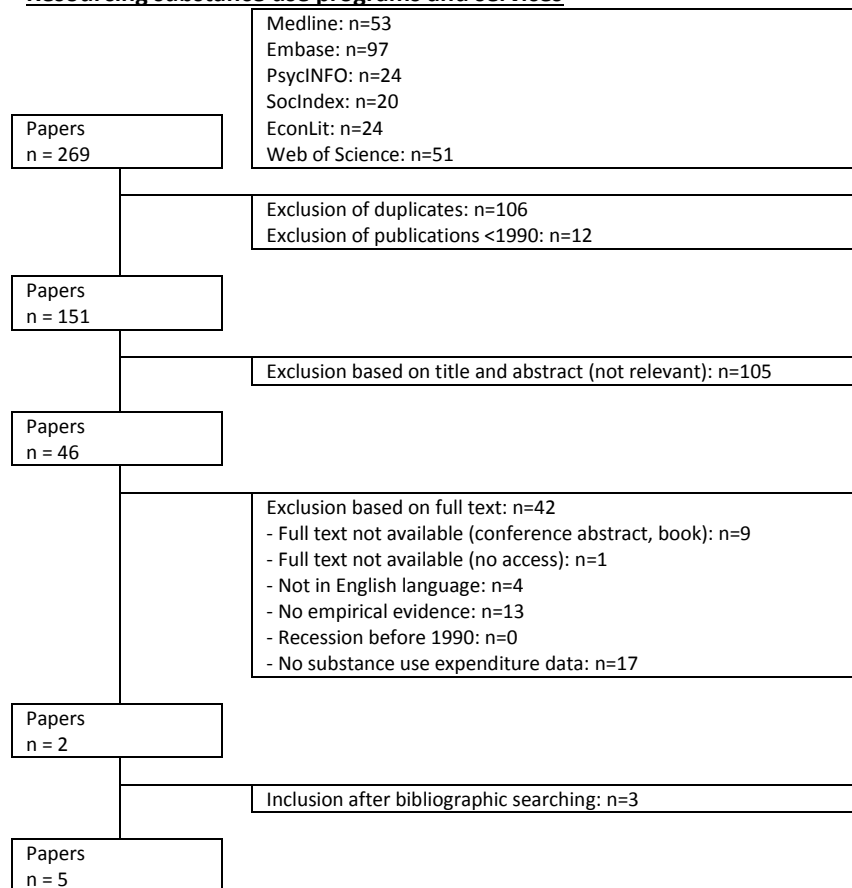


Appendix Figure A2: Selection of papers on alcohol (complementary search).

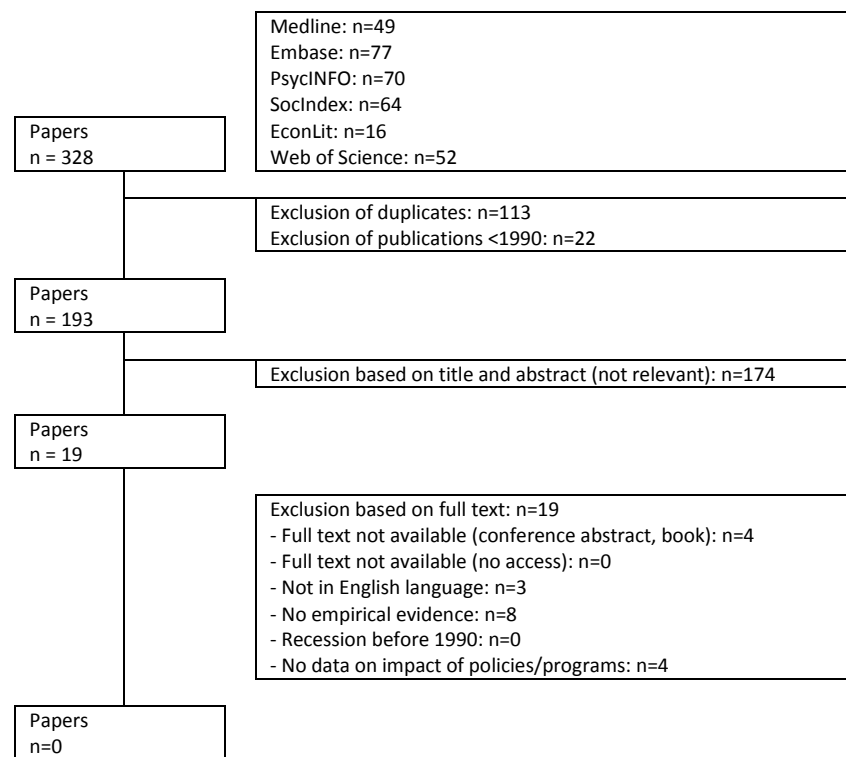


Appendix Figure A3: Selection of papers on programs and services.

Resourcing substance use programs and services



Policies and programs mitigating impacts



Appendix Table A1: Data extraction overview illegal drugs.

Study	Country and data collection years	Context of country	Mechanisms	Study design
	Study population	Determinant / outcome	Results	Degree of evidence
Arkes, J. (2011). Recessions and the participation of youth in the selling and use of illegal drugs. <i>International Journal of Drug Policy</i> , 22, 335-340.	United States 2000-2007	Early 2000s crisis (no technical economic recession ¹); unemployment rate did not reach the levels that were typical of previous crises	Increased availability (thick); Income-effect (thick); Increased non-working time (M7) (thick)	Repeated longitudinal survey combined with cross-sectional samples
	Young adults (20-24 years old)	Unemployment rate (macro) / cannabis use over the past year, use in the past month, heavy use (20 or more days) in the past month, and the number of days used in the past month (micro), and other drug use over the past year, heavy use (5 or more times), and the number of times used (micro)	All estimates for cannabis are positive and highly significant, indicating that use increased when unemployment increased. For other drugs, only one of the three estimates (for number of times used) is significant (positive).	Moderate
Chalmers, J., & Ritter, A. (2011). The business cycle and drug use in Australia: evidence from repeated cross-sections of individual level data. <i>International Journal of Drug Policy</i> , 22, 341-352.	Australia 1991-2007	Early 1990s recession (technical recession in 1991); two consecutive quarters of economic contraction and a marked rise in unemployment rate	Self-medication (thick); Fear of job loss (thick); Income-effect (thick); Increase job chances (thin)	Repeated cross-sectional surveys
	Population 14-49 years old	Income per capita (macro) and the unemployment rate (macro) / use of cannabis in the past 12 months and frequency of use (micro)	Young cannabis users (14-24 years) use cannabis more frequently during economic slowdowns characterized by unemployment rate rises. Rising unemployment rates are associated with increased participation in cannabis use. If the slowdown is characterized by rising unemployment rates and falling real income per capita, an increasing number of young Australians would use cannabis. If both indicators were rising the	Moderate

¹ With a 'technical economic recession' we mean two consecutive quarters of negative economic growth as measured by a country's real (inflation adjusted) Gross Domestic Product.

			direction of change in cannabis use depends on the relative sizes of their increases. Consequent on an unemployment rate rise, people aged in their late 30s and 40s will use cannabis less frequently. Participation rises if income per capita falls.	
Coell, E., Sánchez-Niubò, A., Delclos, G. L., Benavides, F. G., & Domingo-Salvany, A. (2015). Economic crisis and changes in drug use in the Spanish economically-active population. <i>Addiction</i> . Published Online First: 16 March 2015.	Spain 2005-2011	Post-2008 economic recession (technical recession in 2008-2009 and 2011); as an illegal but increasingly tolerated substance, cannabis use has become very common in Spain. Preventive measures have been set up to inform people of the risks associated with its use	Increased non-working time (M7) (thick); Self-medication (thick); Fear of job loss (thick); Income effect (thin)	Repeated cross-sectional surveys
	Economically active population (working or unemployed) 16-64 years old	Post-2008 economic recession (macro) and unemployment (micro) / sporadic use (1-9 days in past 30 days) and heavy use (10-30 days in past 30 days) of cannabis and hypnotics/sedatives (micro)	Cannabis use remained mostly unchanged between before and during the recession. Unemployed men and women were more likely to have increased sporadic use of cannabis during the recession than employed individuals. Use of hypnotics/sedatives increased among men (both sporadic and heavy use) and women (only heavy use). Employed men were more likely to have increased heavy use of hypnotics/sedatives overall than unemployed men. The mechanism might be fear of job loss.	Moderate
Compton, W. M., Gfroerer, J., Conway, K. P., & Finger, M. S. (2014). Unemployment and substance outcomes in the United States 2002-2010. <i>Drug and Alcohol Dependence</i> , 142, 350-353.	United States 2002-2010	Post-2007 Great Recession (technical recession in 2008-2009)	Unclear (thin)	Repeated cross-sectional survey
	Population 18 years and older	Post-2007 Great Recession (macro), local county-level unemployment rates (macro) and unemployment (micro) / any past 30 day illegal drug use (micro), illegal drug abuse and dependence based on DSM-IV criteria (micro), and any use of marijuana during the period from 13 to 24 months prior to the survey (micro)	Illegal drug use and illegal drug abuse and dependence were more prevalent among the unemployed than the employed, but this did not differ between before, at the start of and during the recession. Past-year job loss preceded past-month marijuana use, but prior marijuana use also preceded unemployment.	Moderate
Epele, M. E. (2010).	Argentina	Recession 2001-2002 (technical	Income-effect (switching) (thick)	Ethnographic

<p>Memory, forgetting, and economic crisis: drug use and social fragmentation in an Argentine shantytown. <i>Medical Anthropology Quarterly</i>, 24, 22-41.</p>	2001-2003	recession in 2001-2002); the prices of cocaine increased and the quality decreased in this neighborhood; poverty increased to half of the country's population. The official unemployment rate reached 25%. Job loss and inflation were on the rise and made it increasingly difficult for working class families to meet basic needs		fieldwork
	Active drug users 18-43 years old from a shantytown in southern Greater Buenos Aires	Not applicable	According to older and former drug users, pill users were marginalized by cocaine users because this practice was associated with poverty and having no resources. The drastic reduction of modes of obtaining resources through both legal and illegal means and the dearth of cash and goods that could be traded for drugs have fostered its substitution by other substances. Cocaine was replaced with psychotropic pills, marijuana, paco (a form of cocaine), and alcohol. According to users, the progressive substitution for cocaine by other substances was tied to the fact that cocaine was of poor quality, brought about no 'high', was expensive, and produced many ailments because of its high toxicity.	Broad
<p>Epele, M. E. (2011). New toxics, new poverty: a social understanding of the freebase cocaine/Paco in Buenos Aires, Argentina. <i>Substance Use & Misuse</i>, 46, 1468-1476.</p>	Argentina 2001-2005/8	Recession 2001-2002 (technical recession in 2001-2002); the prices of cocaine increased and the quality decreased in this neighborhood; poverty increased to half of the country's population. The official unemployment rate reached 25%. Job loss and inflation were on the rise and made it increasingly difficult for working class families to meet basic needs	Income-effect (switching) (thin)	Ethnographic fieldwork
	Active drug users 18-45 years old, their family members, members of	Not applicable	Some neighborhoods were "invaded" by the FBC/Paco. According to residents, dissemination was further facilitated by changes in the access to cocaine "for the poor" and marijuana, in addition to its initial selling price. The early designation of FBC/Paco as the drugs "of the poor" meant that it was "for the poor", as the initial price of one peso equaling	Moderate

	different social organizations, and health professionals in three neighborhood of the Buenos Aires' metropolitan region		a dosage seemed much cheaper than what cocaine was sold for at the time. The use of FBC/Paco began to reach an age group of children and adolescents who had previously used other substances (i.e. glue, alcohol, and marijuana). Given the growing poverty and indigence during the recession, the changing transactions took on new characteristics while the intensive use of Paco adopted this dominant pattern. The changes in the local economies – greater poverty, growth of marginal economies, social programs, and clientelistic policies – modified the repertoire of items available to be traded for drugs, which in turn altered the complex system of transactions and circulation of items, thus altering the local economies	
Kalousova, L., & Burgard, S. A. (2014). Unemployment, measured and perceived decline of economic resources: Contrasting three measures of recessionary hardships and their implications for adopting negative health behaviors. <i>Social Science and Medicine</i> , 106, 28-34.	United States 2009-2011	Post-2007 Great Recession (technical recession in 2008-2009)	Self-medication (thick); Income-effect (thick)	Longitudinal survey with two waves (about a year apart)
	Population from South-East Michigan 19 to 64 years old	Unemployment (micro), decrease in economic resources (micro), and perceived decrease in economic resources (micro) / initiating marijuana use (past twelve months) between baseline and follow-up survey (micro)	Unemployment experience was associated with increased hazard of starting marijuana use. Measured decline in economic resources was associated with lower hazard of starting marijuana use (income-effect mechanism). Perceived decline in economic resources was not associated with starting marijuana use. Perceived decline in economic resources can be seen as a direct expression of the stressfulness and pessimistic appraisal of one's financial situation (self-medication mechanism).	Broad
Lakhdar, C. B., & Bastianic, T. (2011). Economic constraint and modes of consumption of addictive goods. <i>International Journal of Drug Policy</i> , 22, 360-365.	France 2005-2009	Post-2008 economic recession (technical recession in 2008-2009); the economic environment clearly deteriorated, the GDP growth rate declined, and the unemployment rate rose sharply. This degradation of the economic environment was nevertheless countered by social welfare policies	Income-effect (switching) (thick)	Repeated cross-sectional survey
	Illegal drug users interviewed in specialized drug-	Post-2008 economic recession (macro), gross salary growth rate (macro), precarious or insecure	Between 2007 and 2008, whilst gross salary growth rates were falling significantly, the proportion of injecting drug users rose by 1.70%. The greater proportion of injecting drug users is consistently found	Moderate

	treatment centers	living conditions (micro) / number of injecting drug users (micro)	amongst the most precarious users. Between 2007 and 2008-9, the greatest increase of the proportion of injecting drug users is seen amongst the non-precarious individuals. The proportion of injecting drug users amongst the poorest drug users has not changed much, possibly because these individuals were already poor and precarious before the recession. Conversely, the recession might be seen as affecting the non-precarious individuals more severely. The latter may turn to injection as a way to deal with their habit and the increased economic constraint.	
Paraskevis, D., Nikolopoulos, G., Fotiou, A., Tsiara, C., Paraskeva, D., Sypsa, V. et al. (2013). Economic recession and emergence of an HIV-1 outbreak among drug injectors in Athens metropolitan area: A longitudinal study. <i>PLoS ONE</i> , 8(11).	Greece 1998-2012	Post-2008 economic recession (technical recession in 2007-2013); an enormous economic downturn has resulted in massive impoverishment, striking unemployment rates, and extensive homelessness in the marginalized communities	Unclear (thin)	Repeated surveillance data
	HIV registry data from injecting drug users	Unemployment rate (macro), homelessness rate of injecting drug users (macro), and annual growth rate of GDP (macro) / injecting drug use (macro)	There was a statistically significant negative association between the annual change of GDP in Greece and the reporting of injecting drug use in HIV cases. The decline in GDP was inversely correlated with unemployment and homelessness rates in injecting drug users.	Small
Rossi, D., Singh, D. Z., Pawlowicz, M. P., Touze, G., Bolyard, M., Mateu-Gelabert, P. et al. (2011). Changes in time-use and drug use by young adults in poor neighbourhoods of Greater Buenos Aires, Argentina, after the political transitions of 2001-2002: Results of a survey. <i>Harm Reduction Journal</i> , 8.	Argentina 2003-2005	Recession 2001-2002 (technical recession in 2001-2002); poverty increased to half of the country's population. The official unemployment rate reached 25%. Job loss and inflation were on the rise and made it increasingly difficult for working class families to meet basic needs	Increased non-working time (M7) (thick)	Cross-sectional survey and ethnographic fieldwork
	Young current and past injecting drug users 21-35 years old who lived in impoverished drug-impacted	Change between present and three years ago in time spend in a typical week at work, looking for work, hanging out in the neighborhood, performing childcare/doing house work, being with friends, and using	The number of injecting drug users stayed stable between 2001 and 2004. Weekly time spent at work declined significantly for both groups, while time spent looking for work increased significantly for injecting drug users. Among past injecting drug users, 43% of those who either did not work or who decreased their work time increased the time they spent using drugs, whereas only 4% of those who either maintained their work time	Broad

	neighborhoods in Greater Buenos Aires	drugs (micro) / age of first use, and frequency of use “ever” and for last 3 months, for cannabis, intranasal cocaine, non-prescription medicines, alcohol and solvents, as well as different injected drugs (micro)	at the same level, or increased the time they worked, spent more time using drugs. Similarly, among past injecting drug users, time spent using drugs increased among more of those who spent more time looking for work after the recession (48%) than among those who spent less time looking for work (18%). Time using drugs also increased among those who did not look for work in either year (38%).	
Sareen, J., Afifi, T. O., McMillan, K. A., & Asmundson, G. J. (2011). Relationship between household income and mental disorders: findings from a population-based longitudinal study. <i>Archives of General Psychiatry, 68</i> , 419-427.	United States 2001-2005	Early 2000s crisis (no technical economic recession); unemployment rate did not reach the levels that were typical of previous recessions	Self-medication (thin)	Longitudinal survey with two waves (about three years apart)
	Population 18 years and older	Reduction in household income between baseline and follow-up survey (micro) / DSM-IV mental disorders including illegal substance use disorders (micro)	Participants with a decrease in income during the study period, compared with no change in income, were at significantly increased risk of incident mood disorders; substance use disorders (alcohol use disorder, drug use disorder, or nicotine dependence taken together); and any mood, anxiety, or substance use disorders.	Small
Storti, C. C., De Grauwe, P., Sabadash, A., & Montanari, L. (2011). Unemployment and drug treatment. <i>International Journal of Drug Policy, 22</i> , 366-373.	Europe 2002-2007 Germany 1988-2007	Early 2000s recession (technical recession in Germany in 2002-2003)	Decreased job chances (thin)	Repeated surveillance data
	People entering drug treatment	Number of treatment centres (macro), unemployment rate (macro), and unemployment (micro) / use of opiates, cocaine, stimulants (amphetamines, MDMA and others), hypnotics and sedatives, hallucinogens, volatile inhalants and cannabis (micro), number of drug users entering treatment (macro)	Europe: A decline in unemployment is associated with an increase in drug treatment clients among unemployed drug users and not among employed drug users. For heroin, a decline in unemployment is associated with a decrease in drug treatment clients. A decline in unemployment is associated with an increase in supply of treatment centres. Germany: A decline in unemployment is associated with an increase in drug treatment clients among unemployed drug users and not among employed drug users. For opiates, unemployment and drug treatment clients are not associated.	Moderate

The studies shaded in grey had a small degree of evidence and were therefore excluded from the results section.

Appendix Table A2: Data extraction overview tobacco.

Study	Country and data collection years	Context of country	Mechanisms	Study design
	Study population	Determinant / outcome	Results	Degree of evidence
Arkes, J. (2012). How Does Youth Cigarette Use Respond to Weak Economic Periods? Implications for the Current Economic Crisis. <i>Substance Use & Misuse</i> , 47, 375-382.	United States 1997-2006	Early 2000s crisis (no technical economic recession); unemployment rate did not reach the levels that were typical of previous recessions	Increased non-working time (M7) (thick); Income-effect (thick); Self-medication (thick); Fear of job loss (thick)	Longitudinal surveys with eight waves (one year apart)
	Young adults 20 to 24 years old	Unemployment rate (macro) / past-year smoking, past-month smoking, and past-month daily smoking (micro)	A 1% increase in the unemployment rate increases the likelihoods of past-year smoking by 6.3%, past-month smoking by 6.8%, and past-month daily smoking by 8.5%.	Moderate
Ásgeirsdóttir, T. L., Corman, H., Noonan, K., Olafsdóttir, & Reichman, N. E. (2014). Was the economic crisis of 2008 good for Icelanders? Impact on health behaviors. <i>Economics & Human Biology</i> , 13, 1-19.	Iceland 2007-2009	Post-2008 economic recession (technical recession in 2007-2010); a sudden and dramatic macro-economic shock of this magnitude and scope affects the entire population, particularly in a small open economy with its own currency and for which exchange rates and prices were suddenly and dramatically altered. The unemployment rate increased from 2.3% to 9.1%. Everyone, regardless of employment, experienced the effects of the recession through price changes. Iceland has a relatively strong system of social support	Income effect (thick); Fear of job loss (thick); Deterioration in social situation (thick)	Longitudinal surveys with two waves (two years apart)
	Population 18 to 79 years old	Post-2008 economic recession (macro), unemployment (micro), number of hours doing paid work (micro), household income	Employment and hours worked fell on average after the recession. Although nominal household income increased somewhat, real household income decreased substantially as a result of the sharp price increases. On average, respondents reported losing 2.056 million krona	Broad

		(micro), loss of financial assets as a result of the recession (micro), increase in mortgage debt since the recession (micro), anxiety or poor mental health (micro) / smoking behavior “do you smoke?” (micro)	in financial assets as a result of the recession, and 63% reported an increase in mortgage debt. The proportion of individuals reporting anxiety or poor mental health increased between 2007 and 2009. Cigarette smoking decreased between 2007 and 2009. Smoking had been declining until about 2004, then started to plateau, and then appeared to resume its decline in 2008. A steeper decline also occurred during the previous recession. The inclusion of the five potential mediators (hours of work, real household income, financial assets, having an increase in mortgage debt, and anxiety or poor mental health) scarcely changed the estimated effects of the recession on smoking.	
Compton, W. M., Gfroerer, J., Conway, K. P., & Finger, M. S. (2014). Unemployment and substance outcomes in the United States 2002-2010. <i>Drug and Alcohol Dependence, 142</i> , 350-353.	United States 2002-2010	Post-2007 Great Recession (technical recession in 2008-2009)	Unclear (thin)	Repeated cross-sectional survey
	Population 18 years and older	Post-2007 Great Recession (macro), local county-level unemployment rates (macro) and unemployment (micro) / any past 30 day tobacco use (micro)	Tobacco use was more prevalent among the unemployed than the employed, but this did not differ between before, at the start of and during the recession.	Moderate
Cutler, D. M., Huang, W., & Lleras-Muney, A. (2015). When does education matter? The protective effect of education for cohorts graduating in bad times. <i>Social Science and Medicine, 127</i> , 63-73.	Europe 1997-2012	Early 2000s recession and post-2008 economic recession	Income-effect (thin); Self-medication (thin)	Repeated cross-sectional survey
	Population 25 to 55 years old	Unemployment rates (macro) / current smoking (micro)	Current unemployment is associated with less smoking, though the interaction with education suggest this improvement is smaller among the more educated. [other results are omitted here because they examine long-term effects: effects of unemployment rate at graduating on smoking later in life]	Moderate
Gallus, S., Ghislandi, S., & Muttarak, R. (2015). Effects of the economic crisis on smoking prevalence and number of smokers in the USA. <i>Tobacco Control, 24</i> , 82-88.	United States 2005-2010	Post-2007 Great Recession (technical recession in 2008-2009)	Self-medication (thick); Increased non-working time (M7) (thick)	Repeated cross-sectional survey
	Population 18 years and older	Post-2007 Great Recession (macro), employment (micro) / current smoking (more than 100 cigarettes in lifetime and currently smoke every day or	The proportion of those in employment declined between 2005-2007 and 2009-2010. Simultaneously, the proportion of unemployed individuals rose substantially. Smoking prevalence also declined significantly. In the post-recession period, the observed smoking prevalence was higher than the expected one based on	Moderate

		some days) (micro)	sociodemographic characteristics and pre-recession trends in smoking prevalence, in men and women. Employed individuals smoked slightly less than the overall population. In contrast, the unemployed had a substantially higher observed smoking prevalence than the average in the pre-recession and the post-recession periods, despite the fact that this category was suddenly (due to the recession) populated by a substantial number of formerly employed people, who on average were less likely to smoke. The recession resulted in an increase in the number of smokers in the US by 0.6 million. This is largely due to an unexpected decrease of 1.7 million smokers among employed and an increase of 2.4 million smokers among unemployed individuals.	
<p>Herzfeld, T., Huffman, S., & Rizov, M. (2014). The dynamics of food, alcohol and cigarette consumption in Russia during transition. <i>Economics & Human Biology, 13</i>, 128-143.</p>	Russia 1994-2005	Economic and social transition 1991 and 1998 (technical recession in 1995-1996 and 1998); the real GDP fell to 55% of its 1989 level by 1998, the lowest point over the last two decades. High inflation, emerging open unemployment, sharp declines in production, and quite common wage arrears eroded the income generating basis for many households. Prices increased sharply. The relative price of cigarettes remained rather stable	Income-effect (switching) (thick); Income-effect (thick); Self-medication (thick); Lower interest in health (thick); Fear of job loss (thick)	Longitudinal surveys with ten waves (one year apart)
	Population 18 years and older	GRP per capita (macro), GRP growth rate (macro), unemployment rate (macro), household income (micro), employment (micro) / number of cigarettes smoked per day (micro)	A 1% increase in the past value of cigarette consumption is predicted to increase current cigarette consumption 0.7%. Older consumers and men are predicted to show a higher persistence of consumption behavior. For consumers in the old cohort, income elasticities for cigarettes are larger in magnitude and statistically significant. Cigarette demand is sensitive to relative price. However, the estimated coefficients suggest a low price elasticity of demand. Consumers from the young cohort and women living in higher income regions and areas with higher GRP growth smoke more cigarettes. The coefficient of regional unemployment and its interaction with individual work is significant, indicating a positive effect of regional unemployment on health behavior only for those who still have a job.	Moderate

<p>Jackson, T. L., Gjelsvik, A., Garro, A., & Pearlman, D. N. (2013). Correlates of Smoking During an Economic Recession Among Parents of Children with Asthma. <i>Journal of Asthma, 50</i>, 457-462.</p>	<p>United States 2008-2010</p>	<p>Post-2007 Great Recession (technical recession in 2008-2009)</p>	<p>Self-medication (thick); Income effect (thick)</p>	<p>Two cross-sectional surveys</p>
	<p>Parents of children with asthma (18 years and older)</p>	<p>Post-2007 Great Recession (macro), unemployment (micro), health insurance (micro), self-reported global life satisfaction (micro), receipt of emotional and social support (micro), frequency of mental distress (micro) / current smoking (micro)</p>	<p>The rates of smoking among parents of children with asthma were similar in 2008 and in 2010. There was a substantial increase in the proportion of parents without health insurance. There was no change in unemployment, life satisfaction, social and emotional support, and mental distress between 2008 and 2010. In 2008 unemployment was not significantly associated with parental smoking, but in 2010 this association was positive and significant. Dissatisfaction with one's life was not a significant predictor of smoking in 2008, in 2010 dissatisfaction had a positive and significant association with smoking. Reporting frequent mental distress and having a health insurance were both positively and significantly associated with smoking in both years. There were no significant association between smoking and not getting social and emotional support in either year.</p>	<p>Broad</p>
<p>Kalousova, L., & Burgard, S. A. (2014). Unemployment, measured and perceived decline of economic resources: Contrasting three measures of recessionary hardships and their implications for adopting negative health behaviors. <i>Social Science & Medicine, 106</i>, 28-34.</p>	<p>United States 2009-2011</p>	<p>Post-2007 Great Recession (technical recession in 2008-2009)</p>	<p>Self-medication (thick); Income-effect (thick)</p>	<p>Longitudinal survey with two waves (about a year apart)</p>
	<p>Population from South-East Michigan 19 to 64 years old</p>	<p>Unemployment (micro), decrease in economic resources (micro), and perceived decrease in economic resources (micro) / initiating cigarette use (past twelve months) between baseline and follow-up survey (micro)</p>	<p>Unemployment experience was associated with increased hazard of starting cigarette smoking. However, this association lost its significance after including the indicators of measured and perceived decrease in economic resources. Measured decline in economic resources was associated with increased hazard of starting cigarette smoking. Perceived decline in economic resources was not associated with starting cigarette smoking. Perceived decline in economic resources can be seen as a direct expression of the stressfulness and pessimistic appraisal of one's financial situation.</p>	<p>Broad</p>
<p>Krasovsky, K. (2013). Sharp changes in tobacco products affordability and the dynamics of smoking prevalence in various social and income groups in Ukraine in 2008-2012. <i>Tobacco</i></p>	<p>Ukraine 2008-2010</p>	<p>Post-2008 economic recession (no GDP data on Ukraine in OECD or Eurostat); the Gross National Product declined by 14.8% in 2009. Between 2008 and 2012, tobacco taxation dominated over other tobacco control policies in Ukraine, the average excise rate</p>	<p>Income-effect (thick)</p>	<p>Repeated cross-sectional survey</p>

<i>Induced Diseases, 11(1).</i>		per pack of cigarettes increased six-fold in 2008-2010, the rate increased by 7% in 2011 and by 15% in 2012		
	Population 12 years and older	Post-2008 economic recession (macro) / daily smoking prevalence (macro)	Daily smoking prevalence decreased from 25.6% in 2008 to 21.8% in 2012. The decline was significant among all age, gender, social and income groups. Decline was much steeper in 2008-2010 – 3.2 percentage points, while in two subsequent years it constituted only 0.6 percentage points. In 2008-2010, the smoking rates declined almost parallel in all income groups. However, in 2010-2012, time trends for the income groups were different: smoking prevalence continued to decline in the two poorer groups, was stable in the middle group and in the two most affluent groups a slight increase was observed.	Moderate
Macy, J. T., Chassin, L., & Presson, C. C. (2013). Predictors of health behaviors after the economic downturn: A longitudinal study. <i>Social Science & Medicine, 89</i> , 8-15.	United States 2005-2011	Post-2007 Great Recession (technical recession in 2008-2009)	Self-medication (thick); Increased non-working time (M3) (thick); Income-effect (thick)	Longitudinal survey with two waves (six years apart)
	Cohort from a US Mid-Western county 37 to 50 years old	Post-2007 Great Recession (macro), change in hours worked per week (micro), change in employment status (micro), financial strain (micro) / any smoking (micro)	Daily smoking decreased significantly from 17.1% in 2005 to 14.7% in 2011. Financial strain was significantly associated with lower likelihood of smoking. A change in hours worked per week or a change in employment status was not associated with smoking status among the entire cohort. There was a significant interaction between change in employment status and educational attainment for smoking status. A change in employment status was associated with higher likelihood of not smoking for those with a bachelor's degree or higher (borderline significant) but lower likelihood of not smoking for those with less than a bachelor's degree (not significant).	Moderate
Margerison-Zilko, C. (2014). Economic contraction and maternal health behaviors during pregnancy in a national sample of U.S. women. <i>Annals of Epidemiology, 24(6)</i> , 432-440.	United States 1982-2002	Early 1980s and early 1990s recession (technical recessions in 1980-1982 and 1990-1991)	Increased non-working time (M3) (thin); Income-effect (thick); Self-medication (thick)	Repeated longitudinal survey combined with cross-sectional samples
	Pregnant women	Unexpected economic contractions – months in which	Unexpected economic contraction was not significantly associated with risk of maternal smoking in any trimester. Interactions between	Moderate

		the state unemployment rate was higher than its statistically expected value (macro), a continuous variable representing all deviations of the observed unemployment rate from its expected value (macro), a binary variable measuring less extreme economic contractions (macro) / any smoking (micro)	economic contraction and race/ethnicity, maternal education, maternal employment, and poverty status were not significant. Less extreme continuous and binary measures of unexpected economic contraction were not significantly related to any pregnancy outcomes in any trimester of pregnancy.	
<p>McClure, C. B., Valdimarsdottir, U. A., Hauksdottir, A., & Kawachi, I. (2012). Economic crisis and smoking behaviour: prospective cohort study in Iceland. <i>BMJ Open</i>, 2(5).</p>	Iceland 2007-2009	Post-2008 economic recession (technical recession in 2007-2010); a sudden and dramatic macro-economic shock of this magnitude and scope affects the entire population, particularly in a small open economy with its own currency and for which exchange rates and prices were suddenly and dramatically altered. The unemployment rate increased from 2.3% to 9.1%. Everyone, regardless of employment, experienced the effects of the recession through price changes. Iceland has a relatively strong system of social support	Increased non-working time (M3) (thick); Income-effect (thick); Self-medication (thick)	Longitudinal survey with two waves (two years apart)
	Population	Post-2008 economic recession (macro), employment (micro), income change (micro), psychological stress (micro) / smoking status (micro), relapse and quitting between baseline and follow-up (micro)	A significant reduction in smoking prevalence was observed from 2007 to 2009 in both males (17.4-14.8%) and females (20.0-17.5%). An individual's employment status was not involved in their risk of relapsing. Among men in the lower-income groups at baseline, those who moved into the high-income group in 2009 experienced an increased risk of relapse – while among those in the high-income group at baseline, those whose incomes dropped had a decreased risk of relapsing. Among women, the direction of associations was similar, but not significant. Further adjustments for a change in stress levels from 2007 to 2009,	Broad

			showed limited attenuation in the coefficients, suggesting some mediation by perceived stress – that is, former smokers whose incomes increased between 2007 and 2009 may have relapsed in part because of an increase in stress. Adjustments for a change in stress levels in the cessation models revealed no diminished significance in effect sizes.	
McInerney, M., & Mellor, J. M. (2012). Recessions and seniors' health, health behaviors, and healthcare use: Analysis of the Medicare Current Beneficiary Survey. <i>Journal of Health Economics, 31(5)</i> , 744-751.	United States 1994-2008	Post-2007 Great Recession (technical recession in 2008-2009)	Increased non-working time (M3) (thick); Fear of job loss (thick)	Repeated rotating panel design (combination of cross-sectional and longitudinal samples)
	Senior population of Medicare beneficiaries 65 years and older	Annual state unemployment rate (macro), diagnosed with a psychiatric or mental condition (micro) / smoking status (micro)	A one percentage point rise in the unemployment rate is associated with a 0.4 to 0.9 percentage point (or 5-12%) increase in the likelihood of having a mental health diagnosis in the last year. In the model of smoking, the unemployment rate coefficient is not statistically significant whether or not state-specific trends are included.	Moderate
Nandi, A., Charters, T. J., Strumpf, E. C., Heymann, J., & Harper, S. (2013). Economic conditions and health behaviours during the 'Great Recession'. <i>Journal of Epidemiology and Community Health, 67(12)</i> , 1038-1046.	United States 2003-2010	Post-2007 Great Recession (technical recession in 2008-2009)	Income-effect (thin); Increased non-working time (M3) (thick); Self-medication (thin)	Repeated cross-sectional survey
	Population 25 years and older living in metropolitan areas	Quarterly metropolitan area unemployment rate (macro), unemployment (micro) / regular smoking (every day), occasional smoking (some days), quit attempt in the previous 12 months (micro)	The mean metropolitan area unemployment rate increased markedly between 2007 (4.5%) and 2010 (9.3%). There was a monotonic decline in prevalence of current smoking over the study period, decreasing from 15.8% in 2003 to 10.8% in 2010. Changes in the unemployment rate were not associated with the probability of being a regular or occasional smoker. However, a one percentage-point increase in the unemployment rate was significantly associated with a 0.78 percentage-point decrease in the prevalence of attempting to quit smoking in the previous year, although this result was not robust to inclusion of metropolitan area specific time trends. Additionally, a one percentage-point increase in the unemployment rate was associated with a 0.32 percentage-point significant decrease in the prevalence of regular smoking among men, but a 0.01 non-significant increase among women.	Moderate
Okechukwu, C., Bacic, J., Cheng, K. W., & Catalano,	United States 1992-2007	Early 2000s crisis (no technical economic recession);	Self-medication (thick)	Repeated cross-

R. (2012). Smoking among construction workers: The nonlinear influence of the economy, cigarette prices, and antismoking sentiment. <i>Social Science & Medicine</i> , 75(8), 1379-1386.		unemployment rate did not reach the levels that were typical of previous crises		sectional survey
	Construction workers 18 to 65 years old (construction workers and other blue-collar workers are among the first to feel the impact of macroeconomic changes)	Labor market shock (difference between expected versus observed employment on the state level, macro), employment (micro) / smoking status (lifetime smoking of at least 100 cigarettes and smoking every day or some days), number of cigarettes per day (micro)	Smokers were more likely to be unemployed (11.1%) than nonsmokers (6.4%). The association between smoking and labor market shock was insignificant. The association between smoking and unemployment was significant. Although not significant, labor market shock had a quadratic association with smoking status among the employed construction workers but not among the unemployed. For the employed, the probability of smoking increased as the economy improved up until the economy began performing as expected. After this, the probability of smoking decreased with further improvements in the economy. Labor market shock had a significant quadratic association with number of cigarettes smoked per day. Similar to associations with the probability of smoking, the number of cigarettes increased as the economy improved up to the point at which the economy was performing as expected. After this, the number of cigarettes decreased with further improvements in the economy.	Moderate
Ruhm, C. J. (2005). Healthy living in hard times. <i>Journal of Health Economics</i> , 24(2), 341-363.	United States 1987-2000	Early 1990s recession (technical recession in 1990-1991)	Increased non-working time (M3) (thick); Self-medication (thick); Fear of job loss (thick); Income-effect (thin)	Repeated cross-sectional survey
	Adult population	State employment rate (macro), group averages of annual household income for the same sex age and education as the respondent (macro), group averages of weekly work hours for the same state-sex-age-education cell as the respondent (macro) / current smoking (smoking every day or some days), consumption of at least 20 cigarettes daily, consumption of at least 40 cigarettes daily (micro)	The employment rate rose 4% over the sample period (from 61.7 to 64.4%), although it declined during the cyclical downturn of the early 1990s. Except for a slight uptick in 1996, adult smoking decreased steadily, falling to 88% of its 1987 value at the turn of the century. A one point drop in the employment rate reduces the estimated prevalence of smoking by 0.13 percentage points. The decline in tobacco use is concentrated among moderate or heavy smokers. A procyclical pattern of smoking is observed for all groups. The predicted effects are of equal size for working individuals than for the full sample. This makes it unlikely that the macroeconomic effects are concentrated among those losing jobs in bad times. A rise in income is unrelated to smoking. Working one more hour per week predicts a slight 0.01 percentage point rise in smoking. Controlling for income and hours attenuates the parameter estimates for smoking on the percent employed by 2%.	Broad
Shaw, B. A., Agahi, N., &	United States	Early 2000s crisis (no technical	Self-medication (thick); Income-effect (thick)	Longitudinal

Krause, N. (2011). Are Changes in Financial Strain Associated With Changes in Alcohol Use and Smoking Among Older Adults? <i>Journal of Studies on Alcohol and Drugs</i> , 72, 917-925.	1992-2006	economic recession); unemployment rate did not reach the levels that were typical of previous crises		survey with six waves (two to four years apart)
	Elderly and retired population 65 to 99 years	Financial strain (micro) / current smoking status (micro)	Smokers reported more financial strain than nonsmokers. The findings suggest a direct association between financial strain and the odds of smoking, indicating that a one-point increase in financial strain is associated with a 12% increase in the likelihood of smoking. The association is stronger at younger ages (among elderly) and among the less well educated elderly. The direct association is particularly strong among 'younger' men in the population. Among this group, a one-point increase in financial strain is associated with a 44% increase in the odds of smoking. Education differences in the effects of financial strain on smoking are particularly apparent among the oldest-old.	Broad
Tangcharoensathien, V., Harnvoravongchai, P., Pitayarangarit, S., & Kasemsup, V. (2000). Health impacts of rapid economic changes in Thailand. <i>Social Science & Medicine</i> , 51(6), 789-807.	Thailand 1988-1999	Economic crisis 1997 (no GDP data on Thailand in OECD or Eurostat); the economic crisis had major social implications for unemployment, under employment, household income contraction, changing expenditure patterns, and child abandonment. The crisis increased poverty incidence by 1 million	Income-effect (thin)	Repeated cross-sectional survey
	Population	Economic crisis 1997 (macro), per capita real income (macro), unemployment rate (macro), mental health (micro) / expenditure on alcohol and tobacco (together) (micro)	The crisis contributed to a substantial reduction in real income without creating a high level of unemployment. Expenditure on alcohol and tobacco in 1996 was higher than expenditure on health in all deciles and had increased significantly from the 1994 level in all income deciles. During the crisis, alcohol and tobacco consumption was sacrificed across all income deciles compared to 1996. However, only the four poorest deciles had a reverse trend whereby health expenditures as a percentage of household income was higher than expenditures on tobacco and alcohol. There was a higher proportion of severe stress, suicidal ideation and hopeless feelings about the future among the unemployed than the employed.	Small
Taylor, M., Barr, M., Stevens, G., Bryson-	New South Wales, Australia	Post-2007 Great Recession (no technical economic recession in	Self-medication (thick); Deterioration in social situation (thin)	Single cross-sectional

Taylor, D., Agho, K., Jacobs, J., & Raphael, B. (2010). Psychosocial stress and strategies for managing adversity: measuring population resilience in New South Wales, Australia. <i>Population Health Metrics</i> , 8.	2007	Australia)		survey
	Population 16 years and older	Open-ended question ‘what are the things that get you through tough times?’ (micro), household income (micro), psychological distress (micro) / coded open-ended responses to question about tough times including category drinking and smoking (together) (micro)	The main resources and strategies employed to get through tough times were social supports (family and self 51.7%, friends and neighbors 21.0%), followed by emotional and philosophical strategies (17.4%) and religious and spiritual beliefs (10.6%). Health-related approaches through a focus on a positive lifestyle and through sports and physical activities were reported by 3.9% and 2.7% respectively, and a less healthy, symptom-related strategy of drinking and smoking was reported by 2.1%. Men were more likely than women to report use of drinking and smoking to get through tough times. There were no differences in using drinking and smoking as coping mechanisms between respondents with low and high income and between respondents who do and don’t speak a language other than English at home. Those with high levels of psychological distress were much more likely to report drinking and smoking.	Small
Verso, M. G., & Picciotto, D. (2014). Effects of the global economic and jobs crisis on the health status of the Italian and sicilian populations: From the occupational medicine to not occupational medicine? <i>Acta Medica Mediterranea</i> , 30, 1129-1136.	Italy and Sicily 2001-2013	Post-2008 economic recession (technical recession in 2007-2009 and 2010-2014); the economic recession resulted in the reduction of many jobs in all the regions of Italy, most especially in the Southern part of the country	Self-medication (thin)	Repeated cross-sectional survey
	Population 15 to 64 years	Post-2008 economic recession (macro), employment rate (macro), employment (micro), reporting economic difficulties (micro), use of antidepressant drugs (micro), depressive symptoms (micro) / smoking status (micro)	The number of unemployed increased from 6.7% in 2008 to 10.7% in 2012 in Italy and from 13.8% in 2008 to 18.6% in 2012 in Sicily. The amount of smoking is higher for people reporting greater economic difficulties (37%) than in the entire population (28%). Comparing the data before the recession, there is an increase in the amount of smoking. The use of antidepressant drugs in recent years has increased by 4.5%. Use is higher in Sicily than in Italy. Depressive symptoms are increased among those with many economic difficulties or without a regular job.	Moderate
Xu, X. (2013). The business cycle and health behaviors. <i>Social Science & Medicine</i> , 77, 126-136.	United States 1976-2005	Early 1990s recession and early 2000s crisis (technical recession in 1990-1991 and no technical economic recession in early 2000s)	Income-effect (thick); Self-medication (thin); Increased non-working time (M3) (thick)	Repeated cross-sectional survey
	Low educated men 25 to 55	State unemployment rate (macro), distribution of	Local unemployment rates and industry mix are strong determinants of wage rates, hours of work per week or employment of the low-	Broad

	years	employment by industry (macro), wage rates (micro), hours of work per week (micro), employment (micro) / current smoking status (current and at least 100 cigarettes in lifetime) (micro), consumption of at least 10 cigarettes daily (micro), consumption of at least 20 cigarettes daily (micro)	educated. Both wages and hours of work are positively associated with cigarette smoking. A one-dollar increase in real wage is associated with a 1.2 percentage point (3.5%) increase in smoking prevalence. In addition, a one unit increase in working hours per week (2%) is associated with a 0.8 percentage point increase in smoking prevalence. Wage and hours of work are also associated with smoking intensity. A one-dollar increase in the real wage is associated with an increase in the probability of having 10 or more cigarettes of 0.5-percentage points, and a one-hour increase in hours of work is associated with an increase in the probability of having 10 or more cigarettes daily of 1.9 percentage points. Hours worked per week represent the total effects of a one-hour change in labor supply, including the effects of changes at the extensive margin (changes in employment) and the effects of changes at the intensive margin (changes in working hours conditional on employment). The results indicate that changes at the extensive margin are the major reason for changes in health behaviors during business cycles.	
<p>Young, D., Yong, H. H., Borland, R., Shahab, L., Hammond, D., Cummings, K. M., & Wilson, N. (2012). Trends in roll-your-own smoking: findings from the ITC Four-Country Survey (2002-2008). <i>Journal of Environmental & Public Health</i>, 2012, 406283.</p>	Canada, United States, United Kingdom, and Australia 2002-2008	Post-2007 Great Recession (technical recession in the Canada, the US, and the UK in 2008-2009, no technical recession in Australia); in the USA and UK, there was evidence of deteriorating economic conditions since 2005 and the impact has been particularly severe and long lasting compared to Canada and Australia	Income-effect (switching) (thick)	Longitudinal survey with seven waves (one year apart)
	Smokers aged 18 years and older	Income (micro), experiencing financial stress (micro) / use of roll-your-own cigarettes (micro), self-reported reasons for using RYO (micro)	The prevalence of any roll-your-own (RYO) cigarette use relative to factory-made (FM) cigarette use increased significantly in the UK, while there was a borderline significant increase in the USA. It decreased significantly in Canada and borderline significantly in Australia. Predominant use rose significantly in the UK and USA, while there was a borderline significant decline in Canada and no change in Australia. The prevalence of predominant RYO use as a proportion of any RYO use increased in all four countries. The most common reason cited for using RYO was relative cost. Financial stress was not associated with predominant RYO use, low income was significantly associated with	Broad

			predominant RYO use. Compared with predominant RYO users, sometime users were more likely to have higher incomes. Young (18-24) smokers experiencing financial stress are disproportionate sometime RYO users and their level of sometime use has increased from 2005 to 2008. While those 55+ who are experiencing financial stress also show a rise in prevalence from 2005 to 2008, their highest level of prevalence is lower than the lowest level of 18-24 year olds. In 2007 and 2008, RYO smokers in the USA were more likely than FM smokers to say that they were experiencing financial stress.	
Zimmermann, M. H., Richardson, D. L., Manderski, M. T. B., Delnevo, C. D., & Steinberg, M. B. (2014). Relighting behaviour among cigarette smokers seeking treatment: implications for tobacco treatment and policy. <i>International Journal of Clinical Practice, 68</i>, 1358-1363.	United States 2010-2012	Post-2007 Great Recession (technical recession in 2008-2009, not in 2010-2012); unemployment peaked at 10% in October 2009 while cigarette prices increased from \$4.20 in 2007 to \$5.61 in 2011. The study took place in New Jersey, a high cigarette-tax state with a high unemployment rate	Income-effect (relighting) (thick)	Single cross-sectional survey
	Smokers from New Jersey seeking treatment	Employment (micro) / relighting cigarettes (micro)	During the recent economic downturn, trends towards fewer cigarettes smoked per day have emerged along with the increased practice of extinguishing and relighting cigarettes ('butting-out'). Of the smokers in the sample, 46% reported relighting cigarettes. Significantly higher rates of relighting were found among those who were unemployed. This remained significant in a multivariate regression analysis.	Moderate

The studies shaded in grey had a small degree of evidence and were therefore excluded from the results section.

Appendix Table A3: Data extraction overview alcohol (studies published between 1 May 2014 and 1 May 2015).

Study	Country and data collection years	Context of country	Mechanisms	Study design
	Study population	Determinant / outcome	Results	Degree of evidence
Aguilar-Palacio, I., Carrera-Lasfuentes, P., & Rabanaque, M. J. (2015). Youth unemployment and economic recession in Spain: Influence on health and lifestyles in young people (16–24 years old). <i>International Journal of Public Health</i> , 60, 427-435.	Spain 2006-2012	Post-2008 economic recession (technical recession in 2008-2009 and 2011-2013); there was an increased government deficit, loss of employment, a reduction of the social services budget, home foreclosures, and an ever growing number of people living below the poverty line. There was a dramatic increase in unemployment rates. At the beginning of 2013, unemployment was over 27% and this was especially serious for people under 25 years, with youth unemployment as high as 57%. Spanish people have strong family relationships and low levels of youth emancipation	Unclear (thin)	Two cross-sectional surveys
	Population 16 to 24 years	Post-2008 economic recession (macro), employment status (never worked, unemployed for less than one year, unemployed for one year or more; micro), duration of contract (<6 months, >=6 months or contract with no specific duration; micro), current state of mental health (GHQ-12; micro) / any alcohol consumption in the last 2 weeks (micro)	Working men decreased from 44.2% in 2006 to 17.2% in 2012. There was an increase in unemployed young men from 8.1% in 2006 to 19.8% in 2012. In women, the number of workers also decreased (36.0 to 17.1%). The percentage of young people who had never worked increased in 2012, especially in men. In women, mental health problems decreased in 2012 compared to 2006, but this trends was not observed in men. Men consumed less alcohol in 2012 than in 2006. In 2012, unemployed young men had a greater risk of current mental health problems than those employed. In women, no significant association was observed between unemployment and health or lifestyles. In men, a higher risk of mental health problems was observed with long time unemployment. In	Moderate

			women, alcohol consumption was lower in those who never worked with respect to workers.	
<p>Compton, W. M., Gfroerer, J., Conway, K. P., & Finger, M. S. (2014). Unemployment and substance outcomes in the United States 2002-2010. <i>Drug and Alcohol Dependence, 142</i>, 350-353.</p>	United States 2002-2010	Post-2007 Great Recession (technical recession in 2008-2009)	Unclear (thin)	Repeated cross-sectional survey
	Population 18 years and older	Post-2007 Great Recession (macro), local county-level unemployment rates (macro) and unemployment (micro) / heavy alcohol use (5 or more drinks on the same occasion on 5 or more days within the 30 days prior to interview; micro), abuse and dependence on alcohol based on DSM-IV criteria within the year prior to interview (micro)	Heavy alcohol use and alcohol abuse or dependence were more prevalent among the unemployed before, at the start of, and during the 2009-2010 period of high unemployment. For heavy alcohol use and alcohol abuse/dependence among the 18-25 age group, there was no excess found for the unemployed persons and, for the time period of 2005-2007, the rate of heavy alcohol use was higher among 18-25 year olds who were employed compared to the unemployed.	Moderate
<p>Cutler, D. M., Huang, W., & Lleras-Muney, A. (2015). When does education matter? The protective effect of education for cohorts graduating in bad times. <i>Social Science and Medicine, 127</i>, 63-73.</p>	Europe 1997-2012	Early 2000s recession and post-2008 economic recession	Income-effect (thin); Self-medication (thin)	Repeated cross-sectional survey
	Population 25 to 55 years old	Unemployment rates (macro) / drinking every day (micro)	Current unemployment is associated with less everyday drinking, though the interaction with education suggest this improvement is smaller among the more educated. [other results are omitted here because they examine long-term effects: effects of unemployment rate at graduating on alcohol use later in life]	Moderate
<p>Garcia, C. I., Martinez, P. S., Gonzalez, M., Garcia, M. B., Trevino, L. J., Lasheras, F. S., & Bobes, J. (2014). Effects of the economic crisis on demand due to mental disorders in Asturias: data from the Asturias Cumulative Psychiatric Case Register (2000-2010). <i>Actas Espanolas</i></p>	Spain (region Asturias) 2000-2010	Post-2008 economic recession (technical recession in 2008-2009 and 2011-2013); there was an increased government deficit, loss of employment, a reduction of the social services budget, home foreclosures, and an ever growing number of people living below the poverty line. There was a dramatic increase in unemployment rates. At the beginning of 2013,	Deterioration in social situation (thick)	Repeated surveillance data

De Psiquiatria, 42, 108-115.		unemployment was over 27% and this was especially serious for people under 25 years, with youth unemployment as high as 57%. Spanish people have strong family relationships and low levels of youth emancipation. The regional community of Asturias accounts for approximately 2.5% of Spain's GDP and has been intensely affected by the recession		
	People who established contact with any mental health facility of Asturias	Post-2008 economic recession (macro), annual administrative incidence rate (AAIR) of subjects who contacted any of the mental health services for the first time during the year (macro), annual administrative prevalence rate (AARP) of the number of subjects who were in contact with the services at the onset of each year plus those who established contact for the first time during the year (macro), general Consumer Price Index (CPI; macro), unemployment rate (macro), GDP per capita adjusted for inflation (macro), affective mood disorders (ICD-10 F30-9) / mental and behavior disorders due to alcohol consumption (ICD-10 F10; macro)	The AAIR was flat during the first years of the study period (as of 2000) and tended to decrease beginning in the year 2005 and above all, beginning in 2008. Broken down by type of mental disorder, there was a decrease in AAIR of mood disorders, but not of mental and behavior disorders due to alcohol consumption. The AARP increased during the study period, especially in the first years (2001-2004). There was a negative correlation between unemployment and AAIR of alcoholism and a positive correlation between GDP and AARP of mood disorders and alcoholism.	Moderate
Harhay, M. O., Bor, J., Basu, S., McKee, M., Mindell, J. S., Shelton, N. J., & Stuckler, D. (2014). Differential impact of the	England 2004-2010	Post-2008 economic recession (technical recession in 2008-2009)	Self-medication (thick); Income-effect (thick)	Repeated cross-sectional survey
	White population	Post-2008 economic recession	Compared with 2006/7, there was a significant decrease in frequent	Broad

<p>economic recession on alcohol use among white British adults, 2004-2010. <i>European Journal of Public Health</i>, 24, 410-415.</p>	<p>20 to 60 years</p>	<p>(macro), income (micro), employment status (micro)/ drinking frequency (whether an individual drank in past 12 months or week and number of drinking days in the past week; micro), drinking level (number of alcohol units drunk on the heaviest drinking day in the past 7 days among those who had drunk alcohol at least one in that week; micro); binge drinking (whether men or women had drunk more than eight or six units, respectively, on the heaviest drinking day during the past 7 days; micro)</p>	<p>drinking from 28.5 to 26.5% in 2008/9. The rate of binge drinking began to drop in 2008/9 and then there was an accelerated decrease until 2010. Drinking 6-7 days per week tended to decline, whereas, drinking 1-2 days per week increased. When constraining the sample to those who reported drinking in the past week, we observe robust declines in the number of days during the past 7 days that an individual drank, drinking on 4 or more days of the past 7 days, binge drinking, and the total units of alcohol consumed on the heaviest drinking day in the past 7 days. Lower income was associated with a lower risk of binge drinking. Among current drinkers, persons who were unemployed had a significantly greater risk of binge drinking, but only after the recession.</p>	
<p>Margerison-Zilko, C. (2014). Economic contraction and maternal health behaviors during pregnancy in a national sample of U.S. women. <i>Annals of Epidemiology</i>, 24, 432-440.</p>	<p>United States 1982-2002</p>	<p>Early 1980s and early 1990s recession (technical recession in 1980-1982 and 1990-1991)</p>	<p>Increased non-working time (M3) (thin); Income-effect (thick); Self-medication (thick)</p>	<p>Repeated longitudinal survey combined with cross-sectional samples</p>
	<p>Pregnant women</p>	<p>Unexpected economic contractions – months in which the state unemployment rate was higher than its statistically expected value (macro), a continuous variable representing all deviations of the observed unemployment rate from its expected value (macro), a binary variable measuring less extreme economic contractions (macro), employment status (micro) / any alcohol use (micro)</p>	<p>Unexpected economic contraction was significantly associated with a 15% increase in risk of alcohol use. However, this association no longer reached significance after adjustment for maternal characteristics. There were significant interactions between economic contractions and both race-ethnicity and maternal education for alcohol use. Black-non-Hispanic women had an increased risk of alcohol use if exposed to an economic contraction during the first or second trimester, whereas nonblack-non-Hispanic women had moderately increased risk if exposed in the third trimester. Women with 12 years education had increased risk of alcohol use if exposed to an economic contraction in the second trimester and women with more than 12 years education had increased risk if exposed in the third trimester. There were no significant interactions by maternal employment or poverty status. Less extreme continuous and binary measures of unexpected economic</p>	<p>Moderate</p>

			contraction were not significantly related to any pregnancy outcomes in any trimester of pregnancy.	
<p>Mattei, G., Ferrari, S., Pingani, L., & Rigatelli, M. (2014). Short-term effects of the 2008 Great Recession on the health of the Italian population: an ecological study. <i>Social Psychiatry and Psychiatric Epidemiology</i>, 49, 851-858.</p>	Italy 2000-2010	Post-2008 economic recession (technical recession in 2007-2009 and 2011-2014); in recent years, a change occurred in Italian's alcohol drinking behaviour: against a general decrease in alcohol consumption, "occasional" consumption increased, witnessing the movement from a traditional, Mediterranean, meal-related, mostly wine drinking to a North-European weekend binge-drinking behaviour; the economic recession resulted in the reduction of many jobs in all the regions of Italy, most especially in the Southern part of the country	Unclear (thin); Income-effect (thick)	Repeated surveillance data
	Population 14 years and older	Real GDP (macro), unemployment rate (macro) / alcohol consumption among people aged over 14: alcohol use in the year (macro), alcohol use every day (macro), alcohol use occasionally (macro), alcohol use out of meal (macro)	The rate of unemployment was associated with less alcohol consumption out of meal. The real GDP was not associated with any alcohol use variable.	Moderate
<p>Murphy, R. D., Zemore, S. E., & Mulia, N. (2014). Housing Instability and Alcohol Problems during the 2007-2009 US Recession: the Moderating Role of Perceived Family Support. <i>Journal of Urban Health-Bulletin of</i></p>	United States 2009-2010	Post-2007 Great Recession (technical recession in 2008-2009); the recession in the US was marked by substantial housing instability. It is estimated that there was a nationwide reduction of 1.2 million households. Evidence suggests that many households began doubling-up with family or	Self-medication (thick)	Cross-sectional survey

<p><i>the New York Academy of Medicine, 91, 17-32.</i></p>		<p>friends and at least some became homeless. Also, being behind on rent or mortgage payments was common.</p>		
	<p>Population 18 years and older</p>	<p>Housing instability (stable housing, having trouble paying rent/mortgage, lost housing; micro), job loss (micro), reduced work hours/pay (micro), lost retirement/savings (micro) / negative drinking consequences experienced in the past 12 months (social, legal, workplace, health, injuries/accidents; micro), dependence symptoms experienced in the past 12 months (DSM-4; micro)</p>	<p>In both univariate and multivariate models, both trouble paying the rent/mortgage (vs. stable housing) and lost (vs. stable) housing were significantly associated with experiencing more negative drinking consequences and dependence symptoms. In univariate, but not in multivariate models, job loss and reduced work hours/pay were strongly associated with experiencing more negative drinking consequences and alcohol dependence symptoms.</p>	<p>Moderate</p>

Appendix Table A4: Data extraction overview unemployment and illegal drug use.

Study	Country and data collection years	Context of country	Mechanisms	Study design
	Study population	Determinant / outcome	Results	Degree of evidence
Atkinson, J. S., Montoya, I. D., Whitsett, D. D., Bell, D. C., & Nagy, C. W. (2003). The relationship among psychological distress, employment, and drug use over time in a sample of female welfare recipients. <i>Journal of Community Psychology, 31</i> , 223-234.	United States 2000-2001	The Temporary Assistance for Needy Families (TANF) placed a 5-year lifetime limit on the receipt of cash benefits. The act also mandates recipients to work or engage in work-related activities (including volunteer work, classroom and on-the-job training, and the provision of child care services for other recipients) in exchange for assistance.	Self-medication (thick)	Longitudinal survey with seven waves (four months apart, total period of two years)
	Women TANF (Temporary Assistance for Needy Families) recipients from Houston, Texas, 18 years and older	Current employment (at any job, full- or part-time) (micro), total number of hours worked in the preceding 4 months (micro), psychological distress (micro) / any use of powder cocaine, crack cocaine, heroin, or methamphetamines in the previous 4 months (micro)	Drug use had an adverse effect on hours worked. Only during one wave did the number of hours worked have a significant effect in reducing future drug use. And while decreases in the level of psychological distress in the sample as a whole were less pronounced than would be hoped for, it is seen that drug use can significantly increase levels of distress and increased hours worked can decrease distress. Changes in psychological distress did not appear to affect subsequent drug use but improvement in distress was seen to subsequently increase the number of hours worked. Results suggest a cycle in which employment at one time period can reduce the likelihood of drug use in the following period, which, in turn, can lead to improvement in distress. This improvement can lead to an increase in the number of hours worked and further improvement in distress levels.	Broad
Bennett, A. S., Elliott, L., & Golub, A. (2013). Opioid and Other Substance Misuse, Overdose Risk, and the Potential for Prevention Among a	United States 2011-2012	Overdose of opioids and other substances has increased dramatically over the past decade across the nation, including among active-duty and veteran populations. The potential overdose risks that veterans face as they readjust to civilian life are often rooted in their military experiences and the associated mental health and pain management challenges.	Self-medication (thin)	Qualitative interviews and focus groups

<p>Sample of OEF/OIF Veterans in New York City. <i>Substance Use & Misuse</i>, 48, 894-907.</p>	<p>Recently separated, formerly enlisted OEF/OIF veterans in low-income, predominately minority neighborhoods of the New York City area who used drugs and/or alcohol since separation</p>	<p>Not applicable</p>	<p>Even where use was not legitimated by a valid prescription, it was perceived to be a means of medicating or coping with pain – whether physical or psychological. Several participants spoke of their varied attempts to simultaneously manage their physical pain and psychological struggles – often in conjunction with alcohol and/or other pharmaceutical or illegal drugs. Several veterans described using prescription opioids or other drugs as part of a more general process of ‘figuring things out’, to quote an Army veteran, who remarked that ‘I smoke pot now, take OxyContin or whatever; trying to figure things out, housing and work’.</p> <p>Another veteran spoke candidly about his own surprise at finding himself homeless, unemployed, and caught up using drugs following his return from Iraq. The lack of meaningful employment and social relationships that he describes – as well as his professed understanding about how such conditions can lead to suicidality – point towards a pressing need to investigate not just common mental health diagnoses but a more diffuse experience of social anomie and isolation among recent veterans.</p>	<p>Broad</p>
<p>Brunswick, A. F., Lewis, C. S., & Messeri, P. A. (1992). Drug Use and Stress: Testing a</p>	<p>United States 1976-1983</p>	<p>Psychological distress is more prevalent in African Americans than Whites and this difference can be attributed largely to socioeconomic differences between the races.</p>	<p>Self-medication (thick)</p>	<p>Longitudinal survey with two waves (seven years apart)</p>
<p>Coping Model in an Urban African-American Sample. <i>Journal of Community Psychology</i>, 20, 148-162.</p>	<p>Urban community sample of African Americans from a single inner-city health center districts (Central Harlem) aged 18-23 years at wave 1 and 26-31 years at wave 2</p>	<p>Number of months per year over the 7-year interval between the two surveys in which the respondent was inactive with respect to either full- or part-time work or school (micro), change in strain (psychological distress) between the two surveys (micro) / number of days of use in the previous year of the following illegal substances: inhalants, marijuana, cocaine, heroin, codeine, morphine, or talwins (grouped as no use, light or casual use (equal to less than weekly use of any substance), moderate use (at least weakly but less than daily),</p>	<p>Observed drug effects supported a vulnerability hypothesis for men. Heavy to moderate drug use greatly exacerbated men’s strain from unemployment. This was a conditional effect: In the absence of unemployment, drug use – even heavy or daily use- gave no evidence of a strainful effect. The model for women showed that moderate and heavy drug use increased strain regardless of the women’s employment status. A more complex relationship emerged for light (less than weekly) drug use. Light drug use was associated with elevated or increased strain among the regularly employed. But it did not reduce strain from unemployment; unemployed light users and nonusers showed equivalent strain levels.</p>	<p>Broad</p>

		and heavy use (daily use of at least one substance)) (micro)		
George, J., Kinner, S. A., Bruno, R., Degenhardt, L., & Dunn, M. (2010). Contextualising psychological distress among regular ecstasy users: the importance of sociodemographic factors and patterns of drug use. <i>Drug and Alcohol Review, 29</i> , 243-249.	Australia 2006	-	Unclear (thin)	Cross-sectional survey
	Regular ecstasy users aged 16 years and older who used ecstasy at least monthly during the preceding six months and were a resident of a capital city of Australia for the past year	Employment status (micro), psychological distress (micro) / use of ecstasy, cannabis, and methamphetamine more than once a week (micro)	Those reporting higher levels of distress were significantly more likely to be unemployed. Compared with those in the low distress category, those in the medium distress category were significantly more likely to use cannabis or methamphetamine, but not ecstasy, more than once a week. When comparing the low distress category with the high distress category, results were not significant, which may be due to a quite low number of respondents in the high distress category.	Broad
Uggen, C., & Shannon, S. K. S. (2014). Productive Addicts and Harm Reduction: How Work Reduces Crime - But Not Drug Use. <i>Social Problems, 61</i> , 105-130.	United States 2014	With prison releases at historic levels, a host of reentry programs has arisen to better integrate former prisoners into the social and economic fabric. At the same time, the nation has been slow to recover from a deep recession, with long-term unemployment reaching a six-decade high in 2010. Supported work remains a potentially important policy lever for addressing social problems such as crime and drug use.	Increased non-working time (M7) (thin); Deterioration in social situation (thin); Income-effect (thick)	Qualitative interviews (once prior to leaving drug treatment and once approximately three months after entering the community)
	Young adults (18-25 years) leaving drug treatment	Not applicable	The study reported data from the 1970s and from 2007-2009. Only the latter data are extracted here, because our review excludes data from before 1990. Income actually increased drug use. Also, sometimes colleagues used drugs and influenced their co-working peers. On the other hand, the extra-economic	Broad

			<p>characteristics of work, such as informal controls and social support, likely inhibited drug use. Jobs provided stability and structure, as well as access to sober peer networks. Jobs structured their time, which kept them from using drugs. The young adults were extremely wary about combining work with sustained or intensive substance use. Maintaining a job while using marihuana or pills is possible, but respondents could not maintain a job while using heroin. Stimulants such as methamphetamine and cocaine may be more compatible with some types of employment than central nervous system depressants such as heroin. Job loss due to profligate drug use was common.</p>	
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Appendix Table A5: Data extraction overview non-peer-reviewed publications.

Study	Country and data collection years	Context of country	Mechanisms	Study design
	Study population	Determinant / outcome	Results	Degree of evidence
IPH (2011). Facing the challenge: The impact of recession and unemployment on men's health in Ireland. Dublin: Institute of Public Health in Ireland.	Ireland 2010	Post-2008 economic recession (technical recession in 2007-2009, not in 2010); The increase in unemployment was most pronounced from 2008 onwards. There was a steeper rise among men than among women	Self-medication (thick)	Cross-sectional survey, interviews, and focus groups.
	Organizations with direct contact with unemployment men (survey) and men themselves as well as project staff and volunteers (interviews and focus groups)	Not applicable	- The questionnaire among organizations who are in direct contact with unemployed men showed that mental health problems were much more prominent than physical health problems. The majority of respondents drew attention to physical health implications for men linked to unemployment or the recession, all noted mental health implications. Organizations were asked to rate, in terms of prevalence, particular health-related challenges for men they worked with which were linked directly to recession or unemployment. Organizations rated stress and anxiety as the most significant challenge for men (80% rating it as very important). - Results from the direct interviews and focus groups with men and project staff and volunteers: For some there has been an increased use of alcohol as a way of coping with unemployment. Some project workers related an increase in alcohol dependency to the breakdown of traditional employment structures, which had also fulfilled a social function for men. Economic downturn has meant, in many cases, that men's lived experiences have become largely individualized, with drinking taking place in more isolated circumstances (usually at home).	Broad
Trautmann, F. (2013). Exploring trends in the illegal drugs market and drug policy responses in the EU. In F. Trautmann, B. Kilmer, & P. Turnbull (Eds.),	European Union 2012	Post-2008 economic recession	Self-medication (thick); Income-effect (thick)	Delphi study
	International drug experts	Post-2008 economic recession (macro) / view of international drug experts on trends in the illegal drugs market in the EU (macro)	On the question 'which trends in the illegal drugs market and drug policy do you expect to be relevant for/in future drug policy making in the EU in the next five years?', 12 of the 36 experts (33%) mentioned the impact of the economic recession. The majority of experts expects that the economic recession will lead to increased drug use. Different respondents refer to an increase of drug use as possibility to escape from the problems people are facing. Others expect that deprivation and social exclusion will result in an increase of psychological problems, which in turn could facilitate a wider spread and increased levels of problem use of licit and illegal substances. Respondents assume that a substantial number of users switch to cheaper (synthetic) drugs instead of (poor quality) "classic" drugs. Especially problem or dependent users	Broad

<p><i>Further insights into aspects of the illegal EU drugs market (report 3).</i> Luxembourg: Publications Office of the European Union.</p>			<p>are expected to look for cheaper alternatives. A few respondents state that there might be a shift to cheaper licit alternatives including alcohol or to mix of illegal drugs and alcohol. 19 of 30 national experts (63%) expect that the economic recession will have substantial impact on the drugs market in their country in the next five years. In the UK, Sweden and the Netherlands only one expert in each country expects a substantial impact, while in Bulgaria, the Czech Republic, Italy and Portugal four experts do so. This might have to do with the fact that these four member states are more seriously affected by the recession than the other three. Several experts explicitly refer to this point.</p>	
<p>Maclean, J. C., Cantor, J. H., & Pacula, R. L. (2015). <i>Economic downturns and substance use treatment: Evidence from admissions data.</i> DETU Working Paper 15-04. PhilaDelphia: Temple University.</p>	<p>United States 1992-2010</p>	<p>Although substance abuse imposes high costs on society, only one in ten persons in the US who display levels of substance abuse that would benefit from specialty treatment receives such treatment. The source of substance abuse funding changes across the business cycle: when the economy enters a downturn the proportion of private spending for substance abuse treatment declines while the proportion of public spending expands.</p>	<p>Self-medication (thick); Increased non-working time (M7) (thick); Income-effect (thick)</p>	<p>Repeated cross-sectional survey</p>
	<p>Population</p>	<p>One year lagged annual state unemployment rate (macro) / proportion of the state that reports past 30 days alcohol misuse (2 [1] or more drinks per day among men [women], or drinking 5 [4] or more drinks in one drinking session among men [women]; macro)</p>	<p>An increase in the lagged state unemployment rate is associated with a decrease in alcohol misuse.</p>	<p>Moderate</p>

Appendix Table A6: Data extraction overview non-English publications.

Study	Country and data collection years	Context of country	Mechanisms	Study design
	Study population	Determinant / outcome	Results	
Hungarian search				
Lackó, M. (2010). A magyarországi rossz egészségi állapot lehetséges magyarázó tényezői [Possible factors explaining poor health status in Hungary]. Közgazdasági Szemle, LVII. Évf, 753–778.	Hungary 1960-2004	Special focus on the change of regime in the early 1990s	Self-medication (thick)	Repeated surveillance data
	General population aged 15-60	Unemployment (macro), income inequality (macro) / alcohol use (macro)	The change of the political regime in Hungary in the 1990s resulted in an increased unemployment rate and forced early retirements that had a negative effect on lifestyle habits including increased alcohol use.	Moderate
Kopp, M. & Skrabski, A. (2000). Pszichoszociális tényezők és egészségi állapot [Psychosocial factors and health status]. Demográfia 43.2-3, 252-278.	Hungary 1995	The greater the distance between poor and rich groups in a country, the higher the morbidity and mortality rates. Economic inequalities within a country are better predictors of the population health status than the absolute level of economic development.	Self-medication (The most essential factor is not the poor socioeconomic situation, but the way one experiences the relative fallback and its psychological impact... During fast socioeconomic changes, those who fall behind may constantly blame themselves or their surroundings, see their future as hopeless, experience loss of control and helplessness... Using alcohol and tobacco may provide a feeling of temporary relief in a hopeless and despairing mood)	Repeated cross-sectional surveys
	Population 16 years and older	Unemployment (micro), financial uncertainty (micro), workplace uncertainty (micro), depression (micro) / tobacco use (micro), alcohol use (micro), drug use (micro)	Depression is the intermediating risk factor between socioeconomic determinants and health status. Unemployment, financial and workplace uncertainty are associated with depression. Depression is associated with an increase of self-harming behaviours including tobacco, alcohol and drug use.	Broad
Sárkány, P. (2014). Illegális tevékenységek	Hungary 1995-2011	Analysis of the share of illegal activities related to prostitution and drugs except smuggling in the	-	Repeated surveillance data

a svéd, a holland és a magyar statisztika alapján [Illegal activities based on statistics in Sweden, the Netherlands and Hungary]. Közgazdasági Szemle 61.2, 193-219.		country's GDP period 1995-2011. Economic recession is acknowledged from year 2008		
		Post-2008 economic recession (macro), GDP (macro) / illegal activities (illegal drugs and prostitution) (macro)	Illegal activities include illegal drug use and prostitution in this study. In 1995, illegal drugs represented 12% of the illegal activities, and prostitution represented 88%. In 2011, illegal drugs represented 43% and prostitution 57%. From 1995 to 2011 the contribution of illegal drugs to the national GDP increased from 0.15% to 0.35%. Illegal drug activities slightly decreased in 2008 and remained the same till a slight increase in 2011, with apparently no effect of the 2008 economic recession.	Small
Mirnic, Z. T. (2004). A vajdasági magyarok egészségvédő és egészségkárosító magatartása [Health-protective and Health-damaging Practices of the Voivode Hungarian Youth]. Fórum Társadalomtudományi Szemle. VI:2, 37-56.	Volvodina, Serbia 2001	Post Yugoslav wars socioeconomic crisis (2001-now). The post-war crisis in Volvodina overlapped with the post-2008 economic crisis	Self-medication (thin)	Cross-sectional survey
	Youth aged 15-29 years	Extended family (micro), legal employment (micro), employment in black market (micro), working with family (micro) / daily use of tobacco (micro), alcohol use at some point in life (micro), illegal drug use at some point in life (micro)	Protective factors for alcohol, tobacco, and illegal drug use are: extended family but not multigenerational homes; religion; legal employment, especially when working with family. Risk factors for alcohol, tobacco, and illegal drug use are: employed in black market; higher education settings.	Moderate
Spanish search				
Gili, M., García Campayo, J., & Roca, M. (2014). Crisis económica y	Spain 2006-2010	Global economic recession started in 2008 hit particularly hard the Spanish economy, driving the country to high unemployment rates	Self-medication (thin)	Epidemiological, transversal and multicenter study performed 2 years before the official

<p>salud mental. Informe SESPAS 2014 [Economic crisis and mental health. SESPAS report 2014]. Gaceta Sanitaria, 28 (S1), 104-108.</p>				<p>starting year of the recession (2006) and 2 years after (2010) by means of a data collection box and the Spanish version of the PRIME-MD diagnostic interview</p>
	<p>General population in primary healthcare - 7940 patients in the first study and 5876 patients in the second study</p>	<p>Post-2008 economic recession (macro), mood disorders (micro), depression (micro), anxiety disorders (micro), consumption of antidepressants (micro) / alcohol dependence (micro), alcohol use (micro)</p>	<p>The results before and during the economic recession show a significant increase ($p < 0.0001$) of mood disorders (major depression 19.4% and 10.8% dysthymia), anxiety disorders (8.4% generalized anxiety disorder and 6.4% in panic attacks), somatoform disorders (7.2%) and alcohol abuse (4.6% dependence of alcohol and 2.4% in alcohol use), leaving out the significance of eating disorders. The paper shows an increase of alcohol abuse - with a gender bias in alcohol use, being higher in men. An increase in the consumption of antidepressants is also observed during the studied period.</p>	<p>Moderate</p>
<p>Raygal Fernández, P. J., Pérez Viguera, M. P., García González, J., Cánovas Gaspar, J. P., Lázaro Meca, R. S., & Martín Retuerto, B. (2011). La crisis económica y la atención de urgencia por abuso de drogas en un hospital general [The economic crisis and emergency treatment for</p>	<p>Spain 2007-2010</p>	<p>Global economic recession started in 2008 hit particularly hard the Spanish economy, driving the country to high unemployment rates</p>	<p>-</p>	<p>Comparison between the number of urgent care demands for drug abuse in the Hospital General Universitario Reina Sofía de Murcia from May-December 2007 to May-December 2010</p>
	<p>Patients going to the emergency room of the hospital driving the study for drug abuse. The hospital receives about 100 000 annual urgent care demands</p>	<p>Post-2008 economic recession (macro) / alcohol abuse (macro), cocaine abuse (macro), number of admissions for drug abuse (macro)</p>	<p>It is found that there is an increase in inpatient revenues compared to 2007 with OR 2.08 (95% CI: 1.13 to 3.85; $p = 0.016$). As for alcohol abuse obtain an OR 0.86 (95% CI: 0.59 to 1.24; $p = 0.44$). For cocaine abuse figures give an OR 1.59 (95% CI: 0.87 to 2.92; $p = 0.14$). The pattern of drug use has not changed in relation to the two years studied, it can be said that the recession has not led to an increase in emergency-related abuse drugs in the periods compared. However, there is an increase of the number of admissions (inpatient revenues) for drug abuse in 2010 compared to 2007, which could indicate that patients go to the emergency room with more severe problems.</p>	<p>Small</p>

drug abuse in a general hospital]. Puesta día urgenc. emerg. Catastr, 11, 0-0.				
Gobierno de España (2015). Desigualdades socioeconómicas, consumo de drogas y territorio en España [Socioeconomic inequalities, drug consumption and territory in Spain].	Spain 2011	Global economic recession started in 2008 hit particularly hard the Spanish economy, driving the country to high unemployment rates	Not mentioned in the study	Cross-sectional survey
	Spanish population from 15 to 64 years old	Unemployment (micro) / smoking status (micro), regular use of cannabis (micro), having used illegal drugs at least once (micro)	It is estimated that unemployed people would have 1.5 to 2 times more risk to be smokers against people who are employed or are in a situation of inactivity. Unemployed people would also be between 2 and 2.5 times more likely to be regular consumers of cannabis and have between 1.5 and 2.5 times more risk of having used illegal drugs at least once. Among women, unemployment is also associated with more drug use, but 50% less than in men.	Moderate
Gobierno de España (2012). Informe Juventud España [Youth report Spain].	Spain 2012	Global economic recession started in 2008 hit particularly hard the Spanish economy, driving the country to high unemployment rates	-	Epidemiological and sociological study using statistical data from a closed questionnaire
	Spanish young people from 15 to 29 years old	Post-2008 economic recession (macro) / drug use (macro), alcohol use (macro)	Drug use showed an increase until 2004 and now, 2004-2010, appear stabilized and even decreased. Except for alcohol.	Small
Dutch search				
Ferat, I. (n.d.). Impact van de economische crisis op de gezondheid [Impact of the economic crisis on health]. University of	Belgium 2007-2010	During the post-2008 economic recession, many companies in Belgium were reorganizing and the purchasing power was also decreasing. Unemployment rates were going up.	Self-medication (thin)	Electronic health record database research
	Patients of a general practice aged 18 years and	Post-2008 economic recession (macro), experiencing any influence of the recession (based on: job loss,	30.7% of the study group experienced any influence of the economic recession, especially men. The recession hit especially 18-59 year olds and not so much people aged 60 years and older, and especially employed people (63%), and less often	Moderate

Gent, Brussels, Antwerpen, and Leuven (Master's thesis).	older	job insecurity, income loss, reorganization at work, temporary unemployment, or hightened workload since September 2008; all yes/no questions; micro) / smoking status (micro)	unemployed people (20%). Of those who experienced any influence of the recession, 46% smoked, while of those who did not experience any influence of the recession, 31% smoked. This difference was significant ($p=0.019$).	
Van der Wielen, S. & Vanderroost, F. (2011). Economische crisis & gezondheid [Economic crisis & health]. University of Brussels, Antwerpen, and Leuven (Master's thesis).	Belgium 2010	In Belgium in the period June 2009 to September 2010, 15499 employees were applicable for collective dismissal. There was a climate of employment insecurity.	Income-effect (thin); self-medication (thick); increased non-working time (M7) (thick)	Cross-sectional survey
	Patients of two general practices aged 18 to 50 years old	Confrontation with dismissal in the past year (of the person itself or someone close; micro), depression (micro) / daily smoking (micro), use of marihuana (micro)	23% of the patients were confronted with dismissal in the past year. Patients who were confronted with dismissal scored on average 32 on the depression scale (scale ranging from 16 to 90), while patients who were not confronted with dismissal scored on average 27 ($p=0.014$). Of the patients who were confronted with dismissal, 33% smoked daily, while of the patients who were not confronted with dismissal, 22% smoked daily ($p=0.036$). Patients were asked for the reason of increased nicotine use. Most respondents mentioned stress as a reason. Use of marihuana did not differ between groups ($p=0.092$).	Moderate

The studies shaded in grey had a small degree of evidence and were therefore excluded from the results section.

7. Appendix client reality check

Appendix 1. List of participating centers in each of the Client reality check jurisdictions

Table 7.1 Participating centers from Catalonia

Name of treatment centre	Address	Type of treatment	Health professionals	Drugs used by patients	Approx. number of patients per month
CAS de Sants	C Comtes de Bell-lloc, 138, 08014, Barcelona	Specialist care Out-patients	Psychologists, psychiatrists, nurses, social workers	Marihuana, amphetamine, cocaine, heroin	30

Table 7.2 Participating centers from Poland

Name of treatment centre	Address	Type of treatment	Health professionals	Drugs used by patients	Approx. number of patients per month
Osrodek Terapii Uzaleznien	19-330 Stare Juchy, ul. Mazurska 33	Specialist care Out-patients	Psychologists, psychiatrists, nurses, pedagogues	New psychoactive substances (boosters), marihuana, amphetamine, mefedron	4
Zaklad Terapii Uzaleznien i Wspoluzaleznienia	41-106 Siemianowice Sl., Al. Mlodych 16	Specialist care Out-patients	Psychologists, psychiatrists, sexologists, sociologists	New psychoactive substances (boosters), marihuana, amphetamine, exctasy	10
Centrum Zdrowia Psychicznego i Terapii Uzaleznien	31-056 Krakow, ul. Estery 6	Specialist care Out-patients	Psychologists, psychiatrists, pedagogues, sexologists	New psychoactive substances (boosters), marihuana, amphetamine	17
Osrodek Pomocy Psychologicznej, Profilaktyki i Terapii Uzaleznien "Mens Sana"	43-100 Tychy, ul. Bukowa 20	Specialist care Out-patients	Psychologists, pedagogues, neurologists	New psychoactive substances (boosters), marihuana, amphetamine	12
Centrum Odwykowe SPZOZ	04-092 Warszawa, ul. Zgierska 18	Specialist care Out-patients	Psychologists, psychiatrists, pedagogues	New psychoactive substances (boosters), marihuana, amphetamine	15

Table 7.3 Participating centers from England

Name of treatment centre	Address	Type of treatment	Health professionals	Drugs used by patients	Number of patients in one month
Community services - Newcastle (Northumberland Tyne & Wear NHS Foundation Trust)	St Nicholas Hospital Jubilee Road Gosforth Newcastle upon Tyne, Tyne and Wear	Specialist care Out-patients/community services	Psychologists, psychiatrists, nurses	Marihuana, amphetamine, cocaine, heroin	20
Community services –Northumberland (Northumberland Tyne & Wear NHS Foundation Trust)	West Farm House 1 W Farm Ct Cramlington, Northumberland	Specialist care Out-patients/community services	Psychologists, psychiatrists, nurses	Marihuana, amphetamine, cocaine, heroin	20
Community Services - North Tyneside (Northumberland Tyne & Wear NHS Foundation Trust)	St. Georges Hospital Morpeth, Northumberland	Specialist care Out-patients/community services	Psychologists, psychiatrists, nurses	Marihuana, amphetamine, cocaine, heroin	20

Appendix 2. Questionnaires

English version

LEADER CLIENT REALITY CHECK QUESTIONNAIRE: ECONOMIC RECESSION AND ILLEGAL DRUG USE

Note: each country to add here an **introduction paragraph**, specifying the aim of the questionnaire, that the crisis is considered to have started approximately in 2007, and that participation is completely voluntary and all answers will be treated anonymously and confidentially.

Notes for the interviewer:

- *Text in italics and purple are instructions for the interviewer, not to be read to the interviewee.*
- *questions do not contain all contain “don’t know/doesn’t answer options”, so if this is the case, please leave question in blank.*

Block A. Background questions

1. Sex (*not to be asked; interviewer to mark corresponding option*)
 Male _____ Female _____
2. Please could you tell me your age? (*if reluctant, ask for an approximate age group, using one of the following: 18-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75+*)

3. How long have you been receiving treatment in this centre?

4. Please could you tell me which was the main drug you were using when you started receiving treatment in this centre? (*wait for spontaneous reply, and only after, if necessary read the answer options*).
 - 4.1 Amphetamine
 - 4.2 Cannabis
 - 4.3 Cocaine
 - 4.4 Crack
 - 4.5 Heroin
 - 4.6 Opiates
 - 4.7 Alcohol (*note: if alcohol is reported, the interviewee is not eligible: END OF INTERVIEW*)
 - 4.8 Others. Please specify: _____ (*note: if a legal drug is reported, the interviewee is not eligible: END OF INTERVIEW*)
5. At that time, were you using any other drugs as well?
 - No (*continue to question 6*)
 - Yes. Please specify which (*tick all that apply*)
 - 5.1 Amphetamine
 - 5.2 Cannabis
 - 5.3 Cocaine
 - 5.4 Crack
 - 5.5 Heroin
 - 5.6 Opiates
 - 5.7 Alcohol
 - 5.8 Others. Please specify: _____
6. How long have you been using illicit drugs? (*wait for spontaneous reply, and only after, if necessary read the answer options*)
 - Less than a year
 - 1-2 years
 - 3-4 years
 - 5-6 years
 - 7-8 years

- 9-10 years
 - For more than 10 years
- 7 Please could you tell me if currently you are:
- Self-employed
 - An employee of a company/business, etc.
 - Unemployed, searching for a job
 - Not currently employed nor seeking a job (*i.e. students, housewives, on permanent leave, retired, etc.*)
- 8 And in 2007, when the crisis began, were you...
- Self-employed (*go to question 9*)
 - An employee of a company/business, etc. (*go to question 9*)
 - Unemployed, searching for a job (*go to question 10*)
 - Neither employed nor seeking a job (*i.e. students, housewives, on permanent leave, retired, etc.*) (*go to question 11*)
- 9 Which of the following sentences best matches your experience since 2007, when the crisis began?
- I have been employed in the same job since 2007.
 - I have been employed most of the time, but have changed jobs.
 - In 2007 I had a job, but I lost it and have not worked since.
 - In 2007 I had a job, but have only worked occasionally since.
 - In 2007 I had a job, but I left it and have not looked for a job since.
 - Others. Please specify: _____
(*go to question 12*)
- 10 Which of the following sentences best matches your experience since 2007, when the crisis began?
- I was unemployed in 2007 and have not found a job since.
- I was unemployed in 2007 and have found a job and worked mostly since.
- I was unemployed in 2007 and worked occasionally since.
- Others. Please specify: _____
(*go to question 12*)
- 11 Which of the following sentences best matches your experience since 2007, when the crisis began?
- I was not working nor looking for a job in 2007 nor have sought a job since then.
- I was not working nor looking for a job in 2007, but since then I looked for a job but didn't find one.
- I was not working nor looking for a job in 2007, but since then I have worked occasionally
- I was not working nor looking for a job in 2007, but since then I found a job and have worked most of the time.
- Others. Please specify: _____
- 12 Please could you tell me which is your highest level of education?
- Without studies
 - Primary studies
 - Secondary studies
 - Higher education (*i.e. University degree, in Spain CFGS*)
- 13 Currently, do you live...
- Alone
 - With a partner
 - With a partner and children
 - With friends
 - Other. Please specify: _____

Block B. Perception of the impact of the crisis on oneself

Now we would like to ask some questions related to how the economic crisis that took place in Europe from approximately 2007 onwards may have affected you personally.

14. In the years before the economic crisis started, more or less around 2005-2006, did you use illicit drugs?
- No (*continue to question 19*)

- Yes. Please could you tell me which drugs? *(wait for spontaneous reply, and only after, if necessary, read the answer options; tick all that apply)*
 - 14.1 Amphetamine
 - 14.2 Cannabis
 - 14.3 Cocaine
 - 14.4 Crack
 - 14.5 Heroin
 - 14.6 Opiates
 - 14.7 Others. Please specify: _____
15. Which of the illicit drugs you mentioned above was the one you used the most before the crisis began (in 2005-2006)?

16. How often did you use illicit drugs before the crisis began (in 2005-2006)?
- Daily
 - Less than daily but more than weekly
 - Weekly
 - Less than weekly
17. Could you tell me approximately how much money you used to spend on illicit drugs each week in 2005-2006, before the crisis began? *(Note: do not read the options out loud, but first wait for a spontaneous reply)*
- I do not know/I am not sure *(go to question 18)*
 - Yes. Amount *(note down in currency used by interviewee, checking that this is a per week estimate)*: _____ *(go to question 19)*
18. Would you say it was more, less or about the same as what you spent on illicit drugs just before you started receiving treatment at this centre?
- More
 - Less
 - About the same
19. How often did you use illicit drugs just before you started receiving treatment at this centre?
- Daily
 - Less than daily but more than weekly
 - Weekly
 - Less than weekly
20. Could you tell me approximately how much money you spent on illicit drugs each week just before you started receiving treatment at this centre? *(Note: do not read the options out loud, but first wait for a spontaneous reply)*
- I do not know/I am not sure
 - Yes. Amount *(note down in currency used by interviewee, checking that this is a per week estimate)*: _____
21. So, comparing before the economic crisis to just before you entered treatment, would you say that over this period the amount of illicit drugs you take has...
- Grown *(go to question 22)*
 - Stayed more or less the same *(go to question 24)*
 - Gone down *(go to question 26)*
22. I will read a few sentences. Please indicate how much you agree or disagree with each of them... *(note: for interviewees stating that they have been unemployed mostly throughout the whole period, do not read options 22.6, 22.7, 22.8 nor 22.9)*

	Strongly agree	Quite strongly agree	Neither agree nor disagree	Quite strongly disagree	Strongly disagree	Not applicable (i.e. if person did not have a job they feared losing; if person states they have not had a job in the whole period)
22.1 I lost a stable source of income (lost my job, couldn't find a job or only had precarious contracts), and this made me distressed, so I sought comfort or an escape route by taking substances						

22.2 I lost a stable source of income (lost my job, couldn't find a job or only had precarious contracts), and using drugs helped me to kill time						
22.3 I lost a stable source of income and social status, so I used more drugs to cope with it.						
22.4 Since I wasn't working I had more free time so I increased my drug consumption						
22.5 My friends and/or family have suffered economic difficulties, and this has affected our relation and or economic situation, so I have taken more drugs as a way to cope						
22.6 Although I have been working mostly throughout this period, the fear of losing my job led me to taking more drugs						
22.7 Although I have been working mostly throughout this period, the level of stress at work has grown, so I took more drugs to cope						
22.8 I haven't personally been affected by the economic crisis, nor have my family and friends, but I have taken more drugs because I found they became cheaper.						
22.9 I haven't personally been affected by the economic crisis, nor have my family and friends, but I have taken more drugs because I found they were easier to get hold of.						

23. Are there any other reasons why your drug intake went up?

_____ (go to question 29)

24. I will read a few sentences. Please indicate how much you agree or disagree with each of them...

	Strongly agree	Quite strongly agree	Neither agree nor disagree	Quite strongly disagree	Strongly disagree	Not applicable (i.e. if person did not have a job they feared losing)
24.1 Although I lost a stable source of income (lost my job, couldn't find a job or only had precarious contracts), I cut back and renounced to other things, but not the drugs I took.						
24.2 Although I lost a stable source of income (lost my job, couldn't find a job or only had precarious contracts), I bought alternative drugs which were cheaper.						
24.3 My economic situation stayed more or less the same through this period, so I didn't change my drug use patterns.						

25. Are there any other reasons that explain why you kept the same level of drug use over this period?

_____ (go to question 29)

26. I will read a few sentences. Please indicate how much you agree or disagree with each of them...

	Strongly agree	Quite strongly agree	Neither agree nor disagree	Quite strongly disagree	Strongly disagree	Not applicable (i.e. if person did not have a job they feared losing)
26.1 I lost a stable source of income (lost my job, couldn't find a job or only had precarious contracts), so I had to cut down on the drugs I took						
26.2 I feared losing my job, or knew that to find a new one I needed to stay clean, so I cut down on the drugs I took						
26.3 My friends and/or family have suffered economic difficulties, so I cut down on the drugs I took to help them out.						
26.4 Although I was working, my workload went down so I was less stressed and didn't need to take as many drugs						
26.5 I lost my job so I found more time available for receiving treatment and this helped me cut down.						

27. Are there any other reasons that explain why your illicit drug use went down over this period?

28. Have you compensated the reduction in your consumption of illicit drugs by...?
- 28.1 Drinking more alcohol? Yes _____ No _____
- 28.2 Smoking more? Yes _____ No _____
- 28.3 Taking other legal drugs? No _____ Yes. Please specify: _____
- 28.4 Using other forms of compensation?
No _____ Yes. Please specify: _____
29. Comparing your current situation to before the crisis (around 2005-2006), would you say your general satisfaction with life is...
- Better *(go to question 30)*
 - Worse *(go to question 30)*
 - More or less the same *(go to question 31)*
30. What do you think this might be due to?
- _____
31. Before the crisis, (around 2005-2006), where you living...?
- Alone
 - With a partner
 - With a partner and children
 - With friends
 - Other. Please specify: _____

Block C. Perception of impact on society

32. Based on your own experience, would you say that since 2007, the beginning of the crisis, the main drug you use has become harder or easier to get hold of, or you haven't noticed a change?
- Harder *(go to question 33)*
 - Easier *(go to question 34)*
 - More or less the same *(go to question 35)*
33. Is this due to? *(note: 33.1, 33.2 and 33.3 are not exclusive, but to be all asked)*
- 33.1 The price going up? Yes _____ No _____
- 33.2 There is less substance on the market? Yes _____ No _____
- 33.3 Others. Please specify: _____
(go to question 36)
34. Is this due to? *(note: 34.1, 34.2 and 34.3 are not exclusive, but to be all asked)*
- 34.1 The price going down? Yes _____ No _____
- 34.2 There is more substance on the market? Yes _____ No _____
- 34.3 Others. Please specify: _____
(go to question 36)
35. What could this be due to?
- _____
36. In your opinion and based on your own experience, would you say that since 2007 onwards the amount of people affected by addictions has...
- Grown *(go to question 37)*
 - Gone down *(go to question 37)*
 - Stayed more or less the same *(go to question 38)*
37. Why?
- _____

Block D. Perception of impact on treatment services

38. Finally, we would like to know your opinion on whether the crisis might have influenced the type of treatment services you receive...
- 38.1 Thinking of medical care (at your primary health care centre, hospitals...), in comparison to before the crisis that started in 2007...
- 38.1.1 Would you say these are more accessible, less accessible, or there have been no changes? More _____ Less _____ No changes _____
- 38.1.2 Would you say the quality of the service is better, worse or there have been no changes? Better _____ Worse _____ No changes _____

38.1.3 Has the waiting time between appointments increased, decreased or stayed more or less the same? More____ Less____ More or less the same____

38.1.4 Have you noticed any other changes you would like to mention?

38.2 Thinking of social aids and services, in comparison to before the crisis that started in 2007...

38.2.1 Would you say economic aids are more available, less available, there have been no changes, or rather that you are not familiar with this type of aid? More____ Less____ No changes____ Not applicable as not familiar____

38.2.2 Would you say that social housing and shelters are more available, less available, there have been no changes, or rather that you are not familiar with this type of service? More____ Less____ No changes____ Not applicable as not familiar____

38.2.3 Have you noticed any other changes you would like to mention?

38.3 Thinking of the services provided in addiction treatment facilities, since you have been receiving this type of treatment...

38.3.1 Would you say these are more accessible, less accessible, or there have been no changes? More____ Less____ No changes____

38.3.2 Has the waiting time between appointments increased, decreased or stayed more or less the same? Increased____ Decreased____ The same____

38.3.3 Have you noticed any other changes you would like to mention?

38.3.4 Could you tell me for how long you have been receiving treatment in addiction treatment facilities, counting both in this centre and in any other facilities you may have been to previously?

Thank you very much for your collaboration!

Catalan version

LEADER CLIENT REALITY CHECK QUESTIONNAIRE: Consum de drogues il·legals i recessió econòmica.

L'objectiu d'aquest qüestionari és evaluar l'efecte de la crisi econòmica en el consum de drogues il·legals. Es considera que la crisi econòmica va començar el 2007.

La participació és completament voluntària i totes les respostes seran tractades anònima i confidencialment.

Notes per l'entrevistador:

- El text en cursiva i color lila són instruccions per l'entrevistador i no cal que siguin llegides a l'entrevistat.
- Les preguntes no contenen la opció de "No sap/No contesta", per tant, si aquest és el cas, deixeu la resposta en blanc, si us plau.

Bloc A. Background questions

5. Sexe *(a omplir per l'entrevistador)*

Home _____ Dona _____

6. Em podria dir la seva edat? *(si es mostra reticent, demanar si us plau per un grup aproximat d'edat dels següents: 18-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75+)*

7. Des de quan realitza tractament en aquest centre?

8. Podria dir-me quina era la droga principal que consumia quan va començar a realitzar tractament en aquest centre? *(esperar que respongui espontàneament, i només després si cal, llegir les opcions de resposta).*

13.1 Amfetamina

13.2 Cànnabis

13.3 Cocaïna

13.4 Crack

13.5 Heroïna

13.6 Opiacis

13.7 Alcohol *(nota: si l'alcohol és la droga principal, l'entrevistat no es pot incloure a l'estudi: **FI DE LA ENTREVISTA**)*

13.8 Altres. Si us plau especifiqueu: _____ *(nota: si la droga principal és legal, l'entrevistat no es pot incloure a l'estudi: **FI DE LA ENTREVISTA**)*

14. En aquella època, consumies alguna altra droga?

- No *(continuar a la pregunta 6)*
- Si. Si us plau, especifiqueu quines *(assenyalar les que convinguin)*

14.1 Amfetamines

14.2 Cànnabis

14.3 Cocaïna

14.4 Crack

14.5 Heroïna

14.6 Opiacis

14.7 Alcohol

14.8 Altres. Si us plau especifiqueu: _____

15. Quants anys fa que consumeix drogues il·legals? *(esperar a una resposta espontànea, només en cas que sigui necessari llegir les opcions de resposta)*

- Menys d'un any
- 1-2 anys
- 3-4 anys
- 5-6 anys
- 7-8 anys

- 9-10 anys
 - Fa més de 10 anys
- 16 Podria dir-me si us plau, la seva situació laboral:
- Treballador per compte propi
 - Treballador d'una empresa, negoci, etc.
 - A l'atur, buscant feina
 - Sense feina, sense estar buscant-ne (*p.e. estudiants, mestresses de casa, permisos permanents???, retirats, etc.*)
- 17 I a l'any 2007, quan va començar la crisi, vostè estava...
- Treballador per compte propi (*anar a la qüestió 9*)
 - Treballador d'una empresa, negoci, etc. (*anar a la qüestió 9*)
 - A l'atur, buscant feina (*anar a la qüestió 10*)
 - Sense feina, sense estar buscant-ne (*p.e. estudiants, mestresses de casa, permisos permanents???, retirats, etc.*) (*anar a la qüestió 11*)
- 18 Quina de les següents frases encaixa millor amb la seva situació des del 2007, quan la crisi va començar?
- Tinc la mateixa feina que al 2007.
 - He tingut feina la major part del temps, tot i que he canviat de feina/es.
 - Al 2007 tenia feina, però la vaig perdre i no he treballat des d'aleshores.
 - Al 2007 tenia feina, però només he treballat ocasionalment des d'aleshores.
 - Al 2007 tenia feina, però la vaig deixar i no he buscat cap feina des d'aleshores.
 - Altres, especifiqueu: _____
(*anar a la qüestió 12*)
- 19 Quina de les següents frases encaixa millor amb la seva situació des del 2007, quan va començar la crisi?
- Estava aturat al 2007 i que no ha trobat cap feina des d'aleshores
 - Estava aturat al 2007 i vaig trobar una feina i he treballat des d'aleshores.
 - Estava aturat al 2007 i he treballat ocasionalment des d'aleshores.
 - Altres. Si us plau, especifiqueu: _____
(*anar a la qüestió 12*)
- 20 Quina de les següents frases encaixa millor amb la seva situació des del 2007, quan va començar la crisi?
- Ni treballava ni buscava feina al 2007, tampoc he buscat cap feina des d'aleshores
 - Ni treballava ni buscava feina al 2007, però en aquest temps he buscat feina però no n'he trobat
 - Ni treballava ni buscava feina al 2007, però en aquest temps he treballat ocasionalment.
 - Ni treballava ni buscava feina al 2007, però en aquest temps he trobat feina i he treballat des d'aleshores.
 - Altres. Si us plau, especifiqueu: _____
- 21 Podria, si us plau, indicar el nivell d'estudis? could you tell me which is your highest level of education?
- Sense estudis
 - Estudis primaris
 - Estudis secundaris
 - Estudis superiors (*p.e. estudis universitaris, grau superior*)
- 22 Actualment, vostè viu...
- Sol
 - Amb parella
 - Amb parella i fill/s
 - Amb amics
 - Altres. Si us plau especifiqueu: _____

Bloc B. Percepció de l'impacte de la crisi en un mateix

Ara voldríem realitzar algunes preguntes per evaluar com la crisi econòmica que ha afectat Europa des del 2007 l'ha afectat personalment.

39. En els anys anteriors a l'inici de la crisi econòmica, aproximadament 2005-2006, consumia drogues il·legals?
- No (*continuar a la qüestió 19*)
 - Si. Si us plau, podria dir-me quines? (*esperar a una resposta espontània, només en cas que sigui necessari llegir les opcions de resposta*)
 - 39.1 Amfetamines
 - 39.2 Cànnabis
 - 39.3 Cocaïna
 - 39.4 Crack
 - 39.5 Heroïna
 - 39.6 Opiacis
 - 39.7 Altres. Si us plau especifiqueu: _____
40. Quina de les drogues il·legals esmentades era que la que consumia majoritàriament abans que comencés la crisi (2005-2006)?
- _____
41. Amb quina freqüència consumia drogues il·legals abans del començament de la crisi (2005-2006)?
- Diàriament
 - Menys sovint que diàriament, però més que setmanalment
 - Setmanalment
 - Menys que setmanalment
42. Podria dir-me aproximadament quina quantitat de diners gastava en el consum de drogues il·legals per setmana al 2005-2006, abans que comencés la crisi? (*Nota: no llegir les opcions, primer esperar una resposta espontània*)
- No ho se/no n'estic segur (*anar a la qüestió 18*)
 - Si. Quantitat (*anotar en la moneda utilitzada per l'entrevistat, tenint en compte que es tracta d'una estimació setmanal*): _____ (*anar a la qüestió 19*)
43. Diria que era més, menys o similar al que consumia quan va començar el tractament en aquest centre?
- Més
 - Menys
 - Similar
44. Amb quina freqüència consumia drogues il·legals abans d'iniciar tractament en aquest centre?
- Diàriament
 - Menys sovint que diàriament, però més que setmanalment
 - Setmanalment
 - Menys que setmanalment
45. Em podria dir aproximadament quants diners gastava setmanalment en drogues il·legals abans d'iniciar tractament en aquest centre? (*Nota: no llegir les opcions, primer esperar una resposta espontània*)
- No ho se/No n'estic segur.
 - Si. Quantitat (*anotar en la moneda utilitzada per l'entrevistat, tenint en compte que es tracta d'una estimació setmanal*): _____
46. Aleshores, comparant abans de l'inici de la crisi amb just abans de iniciar tractament aquí, diria vostè que el seu consum de drogues il·legals ha ...
- Augmentat (*anar a la qüestió 22*)
 - S'ha mantingut més o menys igual (*anar a la qüestió 24*)
 - Ha disminuït (*anar a la qüestió 26*)
47. Llegiré unes frases. Si us plau indiqui quant d'acord o en desacord esteu amb cadascuna d'elles... (*nota: pels entrevistats que refereixen que han estat sense feina en aquest període, no llegir opcions; 22.6, 22.7, 22.8 nor 22.9*)

	Completament d'acord	Força d'acord	Ni d'acord ni en desacord	Força en desacord	Completament en desacord	No aplicable (p.e. si la persona no tenia una feina durant el període)
22.1 He perdut una font estable d'ingressos (he perdut la feina, no vaig poder trobar una feina o només he tingut contractes precaris), i això m'ha estressat, per això he recorregut en les drogues per trobar-me millor o com a via d'escapament						
22.2 He perdut una font estable d'ingressos d'ingressos (he perdut la feina, no vaig poder trobar una feina o només he tingut contractes precaris), i consumia drogues per omplir el temps						
22.3 He perdut una font estable d'ingressos d'ingressos i d'estatus social, he augmentat el consum per sentir-me millor						
22.4 Com que no treballava tenia més temps lliure i per tant va augmentar el consum de drogues						
22.5 Els meus amics i/o família han sofert dificultats econòmiques i això ha afectat la nostra relació i/o la situació econòmica, per tant he pres més drogues per suportar-ho						
22.6 Tot i que he estat treballant majoritàriament durant aquest període, la por a perdre la feina ha fet que augmenti el meu consum						
22.7 Tot i que he estat treballant majoritàriament durant aquest període, el nivell d'estrès a la feina ha augmentat i he augmentat el consum per sentir-me millor suportar-ho						
22.8 No m'ha afectat la crisi econòmica personalment, ni tampoc als meus amics o familiars, però he consumit més drogues perquè les trobava més barates.						
22.9 No m'ha afectat la crisi econòmica personalment, ni tampoc als meus amics o familiars, però he consumit més drogues perquè m'ha sigut més fàcil trobar-les						

48. Hi ha algun altre motiu pel qual el seu consum de drogues ha augmentat?

_____ (anar a la qüestió 29)

49. Llegiré unes frases. Si us plau indiqui quant d'acord o en desacord esteu amb cadascuna d'elles...

	Completament d'acord	Força d'acord	Ni d'acord ni en desacord	Força en desacord	Completament en desacord	No aplicable (p.e. si la persona no tenia una feina durant el període)
24.1 Tot i que he perdut una font estable d'ingressos (vaig perdre la feina, no n'he pogut trobar o he tingut contractes precaris), he retallat despeses i he renunciat a altres coses però no al consum de drogues.						
24.2 Tot i que he perdut una font estable d'ingressos (vaig perdre la feina, no n'he pogut trobar o he tingut contractes precaris), he consumit drogues més econòmiques.						
24.3 La meva situació econòmica s'ha mantingut més o menys estable durant aquest període, i per tant no he						

canviat el meu patró de consum.

50. Em podria dir, si hi ha algun altre motiu que expliqui perquè ha mantingut el mateix nivell de consum de drogues durant aquest període?

_____ (anar a la qüestió 29)

51. Llegiré unes frases. Si us plau indiqui quant d'acord o en desacord esteu amb cadascuna d'elles...

	Completament d'acord	Força d'acord	Ni d'acord ni en desacord	Força en desacord	Completament en desacord	No aplicable (p.e. si la persona no tenia una feina durant el període)
26.1 He perdut una font estable d'ingressos (he perdut la feina, no vaig poder trobar una feina o només he tingut contractes precaris), i per tant he disminuït el consum de drogues.						
26.2 Tenia por a perdre la meua feina, o sabia que per trobar una nova feina necessitava estar perfectes condicions, per tant he disminuït el consum						
26.3 Els meus amics i/o familiars han patit dificultats econòmiques, i per tant he disminuït el consum de drogues per ajudar-los.						
26.4 Tot i que treballava, el volum de feina ha disminuït, i com que tenia menys estrés he disminuït el consum de drogues.						
26.5 He perdut la meua feina, recuperant temps lliure que m'ha permès trobar temps per realitzar un tractament que m'ha ajudat a disminuir el consum de drogues.						

52. Em podria dir, si hi ha algun altre motiu que expliqui perquè ha disminuït el consum de drogues durant aquest període?

53. Ha intentat compensar la disminució del consum de drogues....?

28.1 Bevent més alcohol? Si _____ No _____

28.2 Fumant més? Si _____ No _____

28.3 Prenent altres drogues legals? No _____ Si. Si us plau especifiqueu: _____

28.4 Utilizando otras maneras para compensar? No _____ Si. Si us plau especifiqueu: _____

54. Comparant la seva situació personal amb la d'abans la crisi (sobre 2005-2006) diria que la seva satisfacció general amb la seva vida és...

- Millor (anar a la qüestió 30)
- Pitjor (anar a la qüestió 30)
- Similar (anar a la qüestió 31)

55. A què creu que es pot atribuir?

56. Abans de la crisi, (sobre 2005-2006), vostè estava vivint....?

- Sol
- Amb parella
- Amb parella i fills
- Amb amics
- Altres. Si us plau especifiqueu: _____

Bloc C. Percepció del impacte en la societat

57. Basat en la seva pròpia experiència, diria que des del 2007, el començament de la crisi, la seva droga principal ha sigut més fàcil o més difícil d'aconseguir, o no ha notat cap canvi?

- Més difícil (anar a la qüestió 33)
- Més fàcil (anar a la qüestió 34)
- Més o menys igual (anar a la qüestió 35)

58. A què creu que es deu? (nota: 33.1, 33.2 i 33.3 no són excloents, cal que es responguin totes)

- 33.1 El preu ha augmentat? Si _____ No _____
- 33.2 Hi ha menys droga al mercat? Si _____ No _____
- 33.3 Altres. Si us plau, especifiqueu: _____
(*anar a la qüestió 36*)
59. A què creu que es deu? (*nota: 34.1, 34.2 i 34.3 no són excloents, cal que es responguin totes*)
- 34.1 El preu ha disminuït? Si _____ No _____
- 34.2 Hi ha més substància al mercat? Si _____ No _____
- 34.3 Altres. Si us plau especifiqueu: _____
(*anar a la qüestió 36*)
60. A què creu que es deu?

61. En la seva opinió, i basat en la seva pròpia experiència, diria que des del 2007 endavant la quantitat de gent afectada per les addiccions ha ...
- Augmentat (*anar a la qüestió 37*)
 - Disminuït (*anar a la qüestió 37*)
 - S'ha mantingut més o menys igual (*anar a la qüestió 38*)
62. Perquè?

Bloc D. Percepció de l'impacte en els serveis de salut

63. Finalment, ens agradaria saber la seva opinió sobre si la crisi ha pogut influir en el tipus de tractament rebut...
- 38.1 En referència a l'assistència mèdica (al teu centre d'assistència primària, hospitals...), en comparació amb abans de la crisi que va començar el 2007...
- 76.1.1 Diria que són més accessibles, menys accessibles o que no hi ha hagut canvis? Més _____
Menys _____ Sense canvis _____
- 76.1.2 Diria que la qualitat del servei és millor, pitjor o sense canvis? Millor _____ Pitjor _____
Sense canvis _____
- 76.1.3 El temps d'espera entre les visites ha augmentat, ha disminuït o s'ha mantingut més o menys igual? Més _____ Menys _____ Més o menys igual _____
- 76.1.4 Ha notat algun altre canvi que li agradaria esmentar? _____
- 76.2 En referència als serveis i ajudes socials, comparant amb abans de la crisi que va començar el 2007...
- 76.2.1 Diria que les ajudes econòmiques estan més disponibles, menys disponibles, que no hi ha hagut canvis, o no té prou coneixement sobre aquestes ajudes? Més _____ Menys _____
Sense canvis _____ No aplicable per manca de coneixement _____
- 76.2.2 Diria que les llars socials i els albergs estan més disponibles, menys disponibles, no hi ha hagut canvis o no té prou coneixement sobre el tema? Més _____ Menys _____ Sense canvis _____
No aplicable per manca de coneixement _____
- 76.2.3 Ha notat algun altre canvi que li agradaria esmentar? _____
- 76.3 En referència als serveis proveïts en dispositius de tractament per les addiccions, des que ha estat rebent aquest tipus de tractament ...
- 76.3.1 Diria que són més accessibles, menys accessibles o més o menys igual? Més _____
Menys _____ Igual _____
- 76.3.2 El temps d'espera entre les visites ha augmentat, ha disminuït o s'ha mantingut més o menys igual? Més _____ Menys _____ Més o menys igual _____
- 76.3.3 Ha notat algun altre canvi que li agradaria esmentar? _____
- 38.3.4 Em podria dir durant quan temps ha rebut tractament en serveis de tractament de addiccions, contant tant en aquest centre com en altres centres on hagi estat prèviament?

Moltes gràcies per la seva col·laboració!

Polish version

KWESTIONARIUSZ PROJEKTU LEADER DLA PACJENTÓW: RECESJA GOSPODARCZA I UŻYWANIE NARKOTYKÓW

Celem badania prowadzonego w ramach Europejskiego projektu LEADER jest określenie wpływu kryzysu gospodarczego, którego początek datuje się na rok 2007, na używanie narkotyków oraz problemy z tym związane, patrząc z perspektywy osób używających narkotyków. Udział w badaniu jest całkowicie dobrowolny, a odpowiedzi będą traktowane jako anonimowe i poufne.

Uwagi dla ankietera:

- *Tekst pisany kursywą i na fioletowo jest przeznaczony dla ankietera i nie należy go odczytywać ankietowanemu*
- *pytania nie zawierają opcji odpowiedzi "nie wiem/inne możliwe odpowiedzi", w takim przypadku należy zostawić pytanie bez odpowiedzi.*

Część A. Pytania podstawowe

9. Płeć (*nie należy o to pytać tylko zaznaczyć właściwa odpowiedź*)

Mężczyzna _____ Kobieta _____

2. Czy mógłby Pan/Pani podać swój wiek (*jeśli respondent nie ma chęci odpowiedzieć należy zapytać o klasę wieku w przedziałach: 18-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75+*)

3. Jak długo leczy się Pan/Pani w tym ośrodku?

4. Proszę sprecyzować jakiego głównie narkotyku używał Pan/Pani przed rozpoczęciem leczenia w tym ośrodku? (*proszę poczekać na spontaniczną odpowiedź, i tylko w razie konieczności przeczytać możliwe odpowiedzi*)

22.1 Amfetamina

22.2 Konopie indyjskie, marihuana, haszysz

22.3 Kokaina

22.4 Crack

22.5 Heroina

22.6 Opiaty

22.7 Alkohol (*uwaga: jeśli wymieniony jest alkohol dalszy wywiad jest niepotrzebny: KONIEC WYWIADU*)

22.8 Inne. Proszę wymienić: _____ (*uwaga: jeśli wymienione są legalne środki odurzające dalszy wywiad jest niepotrzebny: KONIEC WYWIADU*)

5. Czy w tym czasie używał Pan/Pani także innych narkotyków?

- Nie (*proszę przejść do pytania 6*)
- Tak. Proszę określić jakich (*zaznaczyć właściwe odpowiedzi*)

5.1 Amfetamina

5.2 Konopie indyjskie, marihuana, haszysz

5.3 Kokaina

5.4 Crack

5.5 Heroina

5.6 Opiaty

5.7 Alkohol

5.8 Inne. Proszę wymienić: _____

6. Od jak dawna używa Pan/Pani narkotyków? (*proszę poczekać na spontaniczną odpowiedź, w razie konieczności przeczytać możliwe odpowiedzi*)

- Krócej niż jeden rok
- 1-2 lata
- 3-4 lata
- 5-6 lat

- 7-8 lat
- 9-10 lat
- Dłużej niż 10 lat

7. Proszę powiedzieć, czy obecnie:

- Pracuje Pan/Pani na własny rachunek
- Jest Pan/Pani zatrudniony w firmie, przedsiębiorstwie
- Jest Pan/Pani bezrobotny i szuka Pan/Pani pracy
- Jest Pan/Pani niezatrudniony i nie szuka Pan/Pani pracy (*tj. studenci, panie domu, na urlopie bezpłatnym, emeryt itp.*)

8. I w roku 2007, kiedy zaczął się kryzys gospodarczy....

- Pracował Pan/Pani na własny rachunek (*proszę przejść do pytania 9*)
- Był Pan/Pani zatrudniony w firmie, przedsiębiorstwie (*proszę przejść do pytania 9*)
- Był Pan/Pani bezrobotny i szukał Pan/Pani pracy (*proszę przejść do pytania 10*)
- Był Pan/Pani niezatrudniony I nie szukał Pan/Pani pracy (*tj. studenci, panie domu, na urlopie bezpłatnym, emeryt itp.*) (*proszę przejść do pytania 11*)

9. Które z poniższych zdań najlepiej oddaje Pana/Pani doświadczenia w okresie od roku 2007, kiedy rozpoczął się kryzys gospodarczy?

- Począwszy od roku 2007 jestem zatrudniony w tym samym miejscu pracy
- W tym czasie byłem przeważnie zatrudniony, ale zmieniałem pracę.
- Miałem pracę w 2007, ale straciłem ją I od tej pory nie pracuję.
- Miałem pracę w 2007, ale od tego roku pracuję tylko dorywczo.
- Miałem pracę w 2007, ale zrezygnowałem z niej i od tego czasu nie szukam pracy.
- Inne. Proszę wymienić: _____ (*proszę przejść do pytania 12*)

10. Które z poniższych zdań najlepiej oddaje Pana/Pani doświadczenia w okresie od roku 2007, kiedy rozpoczął się kryzys gospodarczy?

- W roku 2007 byłem bezrobotny I od tej pory nie znalazłem pracy.
- W roku 2007 byłem bezrobotny ale znalazłem pracę i pracuję przez większość czasu.
- W roku 2007 byłem bezrobotny ale znalazłem pracę i pracuję dorywczo.
- Inne. Proszę wymienić: _____ (*proszę przejść do pytania 12*)

11. Które z poniższych zdań najlepiej oddaje Pana/Pani doświadczenia w okresie od roku 2007, kiedy rozpoczął się kryzys gospodarczy?

- W roku 2007 nie pracowałem I nie szukałem pracy i nadal nie szukam.
- W roku 2007 nie pracowałem i nie szukałem pracy lecz potem szukałem pracy ale jej nie znalazłem.
- W roku 2007 nie pracowałem i nie szukałem pracy lecz potem szukałem pracy i pracowałem stale lub dorywczo.
- Inne. Proszę wymienić: _____

12. Proszę podać najwyższy osiągnięty poziom wykształcenia.

- Podstawowe nieukończone
- Podstawowe
- Średnie
- Wyższe

13. Obecnie mieszka Pan/Pani....

- Sam/sama
- Z partnerką (partnerem)
- Z partnerką (partnerem) i dziećmi
- Z przyjaciółmi
- Inne. Proszę określić: _____

Część B. Postrzeganie wpływu kryzysu na respondentą

Chcielibyśmy teraz zadać kilka pytań dotyczących wpływu kryzysu ekonomicznego, który rozpoczął się w Europie około roku 2007, na Pana/Panią

64. Czy używał Pan/Pani narkotyków w latach poprzedzających kryzys gospodarczy, tj. około roku 2005-2006,
- Nie *(proszę przejść do pytania 19)*
 - Tak. Proszę powiedzieć, jakich? *(proszę poczekać na spontaniczną odpowiedź, i tylko w razie konieczności przeczytać możliwe odpowiedzi)*
- 64.1 Amfetamina
 64.2 Konopie indyjskie, marihuana, haszysz
 64.3 Kokaina
 64.4 Crack
 64.5 Heroina
 64.6 Opiaty
 64.7 Inne. Proszę wymienić: _____
65. Którego z tych narkotyków używał Pan/Pani najczęściej przed kryzysem gospodarczym (tj. w latach 2005-2006)
- _____
66. Jak często używał Pan/Pani narkotyków przed kryzysem gospodarczym (tj. w latach 2005-2006)
- Codziennie
 - Rzadziej niż codziennie ale częściej, niż raz w tygodniu
 - Raz w tygodniu
 - Rzadziej, niż raz w tygodniu
67. Czy może Pan/Pani powiedzieć, ile tygodniowo wydawał Pan/Pani mniej więcej na narkotyki w latach 2005-2006, zanim rozpoczął się kryzys? *(Uwaga: proszę nie czytać na głos opcji odpowiedzi, lecz czekać na odpowiedź spontaniczną)*
- Nie wiem, nie jestem pewny *(proszę przejść do pytania 18)*
 - Tak. Kwota *(proszę zanotować w walucie podanej przez respondenta, upewniając się, że kwota dotyczy tygodnia):* _____ *(proszę przejść do pytania 19)*
68. Czy w Pan/Pani opinii było to więcej, mniej, czy mniej więcej tyle samo, ile krótko przed podjęciem leczenia w tym ośrodku?
- Więcej
 - Mniej
 - Mniej więcej tyle samo
69. Jak często używał Pan/Pani narkotyków krótko przed podjęciem leczenia w tym ośrodku?
- Codziennie
 - Rzadziej niż codziennie ale częściej, niż raz w tygodniu
 - Raz w tygodniu
 - Rzadziej, niż raz w tygodniu
70. Czy może Pan/Pani powiedzieć ile tygodniowo wydawał Pan/Pani na narkotyki krótko przed podjęciem leczenia w tym ośrodku? *(Uwaga: proszę nie czytać na głos opcji odpowiedzi, lecz czekać na odpowiedź spontaniczną)*
- Nie wiem, nie jestem pewny
 - Tak. Kwota *(proszę zanotować w walucie podanej przez respondenta, upewniając się, że kwota dotyczy tygodnia):* _____
71. Tak więc, porównując okres przed kryzysem gospodarczym oraz krótko przed podjęciem leczenia w tym ośrodku używanie narkotyków przez Pana/Panią...
- Zwiększyło się *(proszę przejść do pytania 22)*
 - Pozostało mniej więcej takie same *(proszę przejść do pytania 24)*
 - Zmniejszyło się *(proszę przejść do pytania 26)*

72. Przeczytam kilka zdań. Proszę określić w jakim stopniu Pan/Pani zgadza się z nimi *(uwaga: w przypadku respondentów, którzy deklarowali, że nie pracowali przez większość czasu proszę nie czytać opcji odpowiedzi 22.6, 22.7, 22.8, 22.9)*

	Całkowicie się zgadzam	Zgadzam się	Ani się zgadzam, ani się nie zgadzam	Nie zgadzam się	Całkowicie nie zgadzam się	Nie dotyczy (tj. jeśli respondent nie miał pracy, której bał się utracić, lub w ogóle nie miał pracy w tym okresie)
22.1 Straciłem stałe źródło dochodu (straciłem pracę, nie mogłem znaleźć pracy, lub miałem pracę niepewną) i tak mnie ta sytuacja stresowała, że szukałem ucieczki i pociechy w narkotykach						
22.2 Straciłem stałe źródło dochodu (straciłem pracę, nie mogłem znaleźć pracy, lub miałem pracę niepewną) i używanie narkotyków pomagało mi zabić czas						
22.3 Straciłem stałe źródło dochodu i pozycję społeczną i potrzebowałem narkotyków, żeby sobie z tym poradzić						
22.4 Ponieważ nie pracowałem miałem więcej wolnego czasu na używanie narkotyków, a więc brałem więcej						
22.5 Moi przyjaciele oraz (lub) rodzina doświadczyli trudności gospodarczych, co wpłynęło na nasz związek, a więc używałem narkotyków, żeby sobie poradzić z tą sytuacją						
22.6 Mimo, że pracowałem przez większość czasu obawa przed utratą pracy spowodowała, że brałem więcej narkotyków						
22.7 Mimo, że pracowałem przez większość czasu stress w pracy spowodował, że brałem więcej narkotyków, aby go przetrwać						
22.8 Ani mnie ani mojej rodziny, czy przyjaciół kryzys gospodarczy nie dotknął, ale brałem więcej, bo narkotyki były tańsze						
22.9 Ani mnie ani mojej rodziny, czy przyjaciół kryzys gospodarczy nie dotknął, ale brałem więcej, bo narkotyki były łatwiej dostępne						

73. Czy były jeszcze jakieś inne powody zwiększenia używania narkotyków?

_____ *(proszę przejść do pytania 29)*

74. Przeczytam kilka zdań. Proszę określić w jakim stopniu Pan/Pani zgadza się z nimi....

	Całkowicie się zgadzam	Zgadzam się	Ani się zgadzam, ani się nie zgadzam	Nie zgadzam się	Całkowicie nie zgadzam się	Nie dotyczy (tj. jeśli respondent nie miał pracy, której bał się utracić)
24.1 Chociaż straciłem stałe źródło dochodu (straciłem pracę, nie mogłem znaleźć pracy, lub miałem pracę niepewną) ograniczałem i wyrzekałem się innych rzeczy, ale nie narkotyków						
24.2 Chociaż straciłem stałe źródło dochodu (straciłem pracę, nie mogłem znaleźć pracy, lub miałem pracę niepewną), kupowałem inne, tańsze narkotyki						
24.3 Moja sytuacja ekonomiczna była mniej więcej taka sama przez cały czas, więc nie zaszły żadne zmiany w braniu narkotyków						

75. Czy jest jeszcze inne wytłumaczenie dlaczego brał Pan/Pani tyle samo przez cały czas?

_____ *(proszę przejść do pytania 29)*

76. Przeczytam kilka zdań. Proszę określić w jakim stopniu Pan/Pani zgadza się z nimi

	Całkowicie się zgadzam	Zgadzam się	Ani się zgadzam, ani się nie zgadzam	Nie zgadzam się	Całkowicie nie zgadzam się	Nie dotyczy (tj. jeśli respondent nie miał pracy, której bał się utracić)
26.1 Straciłem stałe źródło dochodu (straciłem pracę, nie mogłem znaleźć pracy, lub miałem pracę niepewną), a więc musiałem ograniczyć branie narkotyków						
26. Obawiałem się, że stracę pracę, lub aby znaleźć nową musiałem być czysty a więc musiałem ograniczyć branie narkotyków						
26.3 Moi przyjaciele oraz (lub) rodzina doświadczyli trudności ekonomicznych, a więc musiałem ograniczyć branie narkotyków aby im pomóc						
26.4 Chociaż pracowałem, moja praca była lżejsza i mniej stresująca a więc nie potrzebowałem brać tak dużo narkotyków						
26.5 Straciłem pracę i miałem więcej czasu na leczenie, które pomogło mi w ograniczeniu brania narkotyków.						

27. Czy jest jeszcze inne wytłumaczenie dlaczego brał Pan/Pani brał Pan/Pani mniej narkotyków w tym czasie? _____

28. Czy zmniejszenie konsumpcji narkotyków kompensował Pan/Pani poprzez.....?

28.1 Picie więcej alkoholu? Tak _____ Nie _____

28.2 Palenie więcej (papierosów)? Tak _____ Nie _____

28.3 Zażywanie legalnych substancji psychoaktywnych? Nie _____ Tak. Proszę określić, jakich: _____

28.4 Stosowanie innych form kompensacji? Nie _____ Tak. Proszę określić, jakich: _____

29. Porównując swoją obecną sytuację do sytuacji sprzed kryzysu (tj. z około roku 2005-2006), jest Pan/Pani zadowolona z życia ogólnie rzecz biorąc

- Bardziej (proszę przejść do pytania 30)
- Mniej (proszę przejść do pytania 30)
- Mniej więcej tak samo (proszę przejść do pytania 31)

30. Z czego Pana/Pani zdaniem to wynika?

31. Przed kryzysem (około roku 2005-2006) mieszkał Pan/Pani...?

- Sam /sama
- Z partnerką/partnerem
- Z partnerką/partnerem i dziećmi
- Z przyjaciółmi
- Inne możliwości. Proszę określić, jakie _____

Część C. Postrzeganie wpływu na społeczeństwo

32. W oparciu o swoje doświadczenie, czy uważa Pan/Pani, że od roku 2007, czyli początku kryzysu, rodzaj narkotyków, których Pan/Pani głównie używał, jest trudniejszy, łatwiejszy do zdobycia, czy też nic się nie zmieniło?

- Trudniejszy (proszę przejść do pytania 33)
- Łatwiejszy (proszę przejść do pytania 34)
- Mniej więcej tak samo (proszę przejść do pytania 35)

33. Czy powodem tego jest, że... (proszę zauważyć, że pytania 33.1, 33.2 i 33.3 nie wykluczają się, proszę zadać je wszystkie)

33.1 Wzrosły ceny? Tak _____ Nie _____

33.2 Tej substancji jest mniej na rynku? Tak _____ Nie _____

33.3 Inne możliwości. Proszę określić, jakie _____ (proszę przejść do pytania 36)

34. Czy powodem tego jest.... (Proszę zauważyć, że pytania 34.1, 34.2 i 34.3 nie wykluczają się, proszę zadać je wszystkie)

- 34.1 Zmalały ceny? Tak _____ Nie _____
 34.2 Tej substancji jest więcej na rynku? Tak _____ Nie _____
 34.3 Inne możliwości. Proszę określić, jakie _____
 (proszę przejść do pytania 36)

35. Co może być tego powodem?

36. W Pana/Pani opinii, w oparciu o osobiste doświadczenia, począwszy od roku 2007 liczba osób uzależnionych....

- Wzrosła (proszę przejść do pytania 37)
- Zmalała (proszę przejść do pytania 37)
- Pozostała mniej więcej taka sama (proszę przejść do pytania 38)

37. Dlaczego?

Część D. Postrzeganie wpływu na leczenie

38. W końcowej części badania chcielibyśmy się dowiedzieć, czy kryzys wpłynął na możliwości Pana/Pani leczenia się

38.1 Biorąc pod uwagę opiekę medyczną (lekarze rodzinni, szpitale....), w porównaniu do okresu przed kryzysem, który rozpoczął się w 2007 roku

114.1.1 Czy uważa Pan/Pani, że opieka medyczna jest łatwiej dostępna, trudniej dostępna, czy też nie ma żadnej zmiany?

114.1.2 _____ Czy uważa Pan/Pani, że jakość opieki medycznej jest lepsza, gorsza, czy też nie ma żadnej zmiany?

114.1.3 _____ Czy okres oczekiwania na poradę zwiększył się, zmniejszył się, czy pozostał taki sam?

114.1.4 _____ Czy zauważył Pan/Pani jeszcze inne zmiany, które chciałby Pan/Pani wskazać?

114.2 _____ Biorąc pod uwagę pomoc społeczną, w porównaniu do okresu przed kryzysem, który rozpoczął się w 2007 roku

114.2.1 Czy uważa Pan/Pani, że materialna pomoc społeczna jest łatwiej dostępna, trudniej dostępna, nie ma żadnej zmiany, czy też nie korzysta Pan/Pani z takiej pomocy? Łatwiej _____ Trudniej _____ Bez zmian _____ Nie korzystam _____

114.2.2 Czy uważa Pan/Pani, że schroniska dla potrzebujących i noclegownie są łatwiej dostępne, trudniej dostępne, nie ma żadnej zmiany, czy też nie korzysta Pan/Pani z takiej pomocy? Łatwiej _____ Trudniej _____ Bez zmian _____ Nie korzystam _____

114.2.3 _____ Czy zauważył Pan/Pani jeszcze inne zmiany, które chciałby Pan/Pani wskazać?

114.3 _____ Rozważając usługi oferowane przez ośrodki leczenia odwykowego od czasu, jak Pan/pani korzysta z takich usług

114.3.1 _____ Czy uważa Pan/Pani, że usługi te są łatwiej dostępne, trudniej dostępne, nie ma żadnej zmiany? Łatwiej _____ Trudniej _____ Bez zmian _____

114.3.2 _____ Czy okres oczekiwania na poradę zwiększył się, zmniejszył się, czy pozostał taki sam? Zwiększył się _____ Zmniejszył się _____ Jest taki sam _____

114.3.3 _____ Czy zauważył Pan/Pani jeszcze inne zmiany, które chciałby Pan/Pani wskazać?

38.3.4 Czy może Pan/Pani powiedzieć, jak długo leczył się Pan/Pani w ośrodkach odwykowych, biorą pod uwagę zarówno ten ośrodek, jak i poprzednie?

Bardzo dziękujemy za współpracę!