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How much does it cost to the family for one of its members to be a drug and alcohol user?

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Abstract. Little research has been carried out assessing the impact on families when one member abuses psychoactive substances, nor the indirect costs of associated problems such as theft, property damage, academic failure, debt, or legal trouble. This study surveyed 441 relatives of drug users in Colombian treatment centers, collecting sociodemographic data, direct and indirect costs, and the impact on four dimensions: family, labour, mental health, and leisure. Analysis of the data evaluated correlations between socioeconomic stratum, income, and the different cost categories. The results showed that having a drug user in the family significantly increases their expenses, and that direct costs are up to six times their monthly budget—and 13 times when including indirect costs. This is the first of various papers aimed at evaluating the direct and indirect costs, as well as the intangible costs related to drug use.

Keywords: Drug Abuse, Direct Costs, Indirect Cost, Impact, Family, Health Economics.



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Introduction

The last 30 years have seen numerous efforts to estimate the costs of alcohol and drug use (Australian Institute of Health and Welfare, 2020; Bouchery et al., 2011; Heien & Pittman, 2015; Rehm, 2007; Single, 2003), and while many discrepancies remain, great efforts have been made to reach methodological agreements (Collins et al., 2006; Verhaeghe, 2017). However, few studies have attempted to assess the economic impact on families when one of its members abuses drugs and/or alcohol, and even fewer have considered the intangible costs of suffering and lower quality of life. The exceptions are studies on “contingent valuation” or “willingness to pay,” which represent disposition to pay for a hypothetical treatment of substance abuse (Jeanrenaud & Pellegrini, 2017; Mosquera & Rodríguez, 2018), but this methodology has many limitations and is based on shaky assumptions.

This article initiates a series of papers that will try to resolve both issues. In what follows, the direct costs (payment for treatments) and indirect costs (academic failure, theft at home or to other people, traffic accidents and legal costs) will be examined, using a methodology developed by the authors. The project received the name of ICVF for its name in Spanish (Impacto del consumo de alcohol y drogas en la Calidad de Vida Familiar).

Theoretical Framework

In the field of health economics, an essential metric is the overall “burden of disease.” With this information it is possible to make decisions and prioritize appropriately at the public policy level. But calculating such metrics requires detailed and permanently updated information on times and reasons for hospitalizations, treatments, deaths, morbidity, and absenteeism from work, among many other economic indicators—therefore only the most developed countries can carry out this type of study with sufficient reliability. Even when there are proposals of international working guides (Collins et al., 2006), each country tends to use specific methodologies that sometimes make it difficult to compare results.

Because low- and middle-income countries rarely have the necessary information, they must resort to the use of indirect indicators. This occurred in the Americas by mandate of CICAD/OAS between 2003 and 2006, when a methodology to calculate human, social and economic costs of drugs in the region was developed (Pérez-Gómez & Wilson-Caicedo, 2000; Pérez-Gómez et al., 2004; Pérez-Gómez et al., 2006). But this methodology focuses on the costs to the state; while in many Latin American countries families must partially or totally assume the costs of treatment. And even in cases where the state covers the full costs of treatment, families must still bear the indirect costs.

Direct and Indirect Costs

Health economics distinguishes between economic costs and non-economic costs of health problems, also called as *direct* or *indirect* costs according to the immediacy of their incidence, and as *implicit* or *explicit* costs according to their visibility (Rogero, 2010). Apart from these, there are additional indirect (non-economic) costs related to quality of life and well-being, which are characterized by being intangible and deferred over time, while direct costs (economic and explicit; also called general costs) represent the consumption of resources and services derived from a process of diagnosis, treatment, outpatient care, palliative care or rehabilitation, and are characterized by being tangible and immediately perceptible (Rogero, 2010; Ripari et al., 2012) (see note 1).

A variant of intangible indirect costs is the valuation of time spent caring for sick or troubled persons, which has been employed mainly with ill or older people. In this was disease generates an economic burden due to the expenditure of resources by caregivers (Ripari et al., 2012). These costs can be valued from the according to revealed preference or declared preference (Ripari et al., 2012). The first considers the time invested in care including intangibles such as opportunity cost (estimating the benefits lost by not having time available to invest) and the proxy good (estimating from a substitute good using market prices). The second can be estimated from contingent valuation (estimating how much one is willing to pay the caregiver for their time, which is influenced by the emotional attachment to the patient (Ripari et al., 2012). Unfortunately, these methods rely strongly on subjectivity, and therefore suffer from a undesirable arbitrariness, as we will analyze in the work on intangible costs.

The health economics literature is abundant with research on the direct and indirect costs of chronic disease care for the institutions and for the patient. However, there have been few studies focusing on the costs for caregivers themselves, who tend to be nuclear family members (Clark, 1994). This type of care constitutes an unpaid system that is based on affective and kinship relationships that is socially assumed as part of domestic tasks. This results in these costs being invisible to the healthcare system, making professional analysis of their costs difficult (Hervas et al., 2007).

The use of psychoactive substances (PAS) is a prominent example of health problems that impose substantial burdens—financial and otherwise—on families who fulfill the role of caregivers, depriving the amount of resources that can be allocated to other needs such as education, housing, investments and retirement savings, leisure activities, emergency expenses and support for other family members. This is why the estimation of disease burden of disease becomes important for the caregiver (Hervás et al., 2007).

Of the three major sources of health care provision—family, the public health system, and the private healthcare industry—the foundation of care remains the family. Family assumes responsibility for specific care

tasks involving infrastructure services (such as accommodation, food, cleaning, shopping) and unpaid services directly related to health (company, payments associated with treatment, paperwork, time spent on care tasks, and related errands). The economic costs for the families can include spending money and time on informal care and in attending to situations involving the affected person (Ripoll & La Parra-Casado, 2009). Time invested is not always considered an economic cost because it is not a cash transaction, but time contributions imply opportunity costs, that is, lost opportunities to earn money by This cost estimate therefore corresponds to the amount that could have been earned if the caregiver had invested that time working in care tasks (Esteban et al., 2020; Hervás et al., 2007).

Directly Cost Associated with the Use of Psychoactive Substances

An exhaustive review in several databases found that the studies published in Spanish, English, Italian, French and German to date on the economic impact of psychoactive substances have focused mainly on wider social costs of this problem, beyond the costs entailed for the caregiver.

Generally, the studies in this area that focus on the economic costs of substance use refer almost exclusively to costs for governments, where the impact of healthcare expenses (specialist care, hospitalization, fetal alcohol syndrome, management of health insurance, medications, prevention and research, outpatient care, victims of crime), lost/impaired productivity (mortality, imprisonment, work absenteeism), and criminal justice (traffic accidents, property damage, theft) are calculated for the country overall (Bouchery et al., 2011; Australian Institute of Health and Welfare, 2020; National Institute on Drug Abuse, 2020; Konnopka & König, 2007; Thavorncharoensap et al., 2009; Devlin et al., 1997). These studies indicate that the costs of medical care are doubled for families with a member with substance use problems (Burke, 1998). However, the findings in this aspect have been underestimated due to lack of data, and for this reason Copello and colleagues (2010) highlight the need for research that fills this gap. Orford et al. (2013) further found that the estimation of these costs is full of methodological shortcomings.

Copello, Templeton and Powell (2009, 2010) were pioneers in estimating this type of cost. With the support of the UK Drug Policy Commission, they developed the first model for estimating the number of affected adult relatives and the economic impact on families and society associated with drug use, taking into consideration daily costs, incidental drug costs, costs related to antisocial behavior, lost job opportunities, and excessive healthcare costs, as well as saved resources. The data were collected through population surveys, data on family composition, data from other research studies, and interviews. The total annual unit costs for each family member were estimated by adding the aforementioned costs, which yielded an estimated economic cost per family of £9,497 per year with a 95% confidence of £7,918–11,076. However, they concluded that the

general lack of data collection is a barrier to advancing this entire area of research, so there is an urgent need to develop robust, well-designed instruments and studies to inform future models and estimates.

Ray and Weisner (2009) conducted a study in the United States comparing the economic impact on caregivers of substance users and people with diabetes or asthma ($n = 25,464$). They found that relatives of people with drinking problems had higher care-related costs than family members of people with diabetes or asthma.

A study by the Australian government on the impact of illicit drug use on families (Parliament of Australia, 2007) summarized the types of costs to the individual, including the purchase of medicines, loans, debt settlement, fines, legal procedures, the cost of treatment, loss of income, housing, inability to make rent payments, education, buying goods and services, among others. Clark and Drake (1995) conducted a randomized controlled trial to construct cost estimates in this area with 169 relatives of people with a psychoactive substance use disorder and dual pathology, of which 70% were parents, 18% siblings and the rest spouses, grandparents, children or other relatives; 82% were women and the average household income was £26,829. These expenses were compared with the time spent on care tasks reported by family members. From this, the annual care time was estimated to be approximately 226 hours, with annual daily care costs for each family member of £2,330, assuming that the job opportunities lost would be the average hourly earnings rate for a 40-hour week.

As far as we know, this type of study has never been done in Latin America. The present work constitutes a first step towards developing a methodology that allows evaluation of both direct and indirect costs, as well as to approach the possibility of evaluating intangible costs in an appropriate way. Three situations will be analyzed here: the comparison of income and expenses by socioeconomic stratum, the costs associated with the age of the consumer, and the costs associated with the years of consumption. It is important to note that for about four years the social security system in Colombia has covered the treatment costs of people with alcohol and other PAS problems for a period of three months, but in general people from the middle and upper strata prefer to take their family members to private centers that can be quite expensive.

Ethical Considerations

The present study and the resulting data have been managed under the principle of accountability and protect them under the Act 1090 of 2006, according to the Bioethical Code and Ethics of the Colombian Association of Psychologists COLPSIC.

Signed informed consent was obtained from all participants, who were of legal age. All participants and managers of treatment facilities received an information letter about the project, in the which their objectives, potential risks, possible benefits, responsibilities and contacts are explained. The project was evaluated and approved by the Ethical Board

of Nuevos Rumbos under code 0046-16102019.

Method

The sampling frame consisted of 102 treatment centers for people with alcohol and PAS problems throughout the country, ensuring that all socioeconomic levels were represented (see note 2). Of these, 17 agreed to formally participate in the project, with some of the largest and best known in the country among them.

The information was provided by relatives of the problematic substance users in the treatment centres.

Instrument

The ICVF project instrument is made up of three sections:

The first 15 items are personal questions and socio-demographic data about the patient and their family member.

The second section evaluates direct and indirect economic impact on the family in seven categories: treatment costs, debt payments, legal problems, traffic accidents, theft/damage to the home, theft/damage to others, and academic failure. The family member assigns an approximate economic value to each of these according to the expenses that resulted from the patient's substance use'. Additionally, they indicate the impact these expenses had in each of these categories on a six-point scale: no impact, minimal impact, some impact, moderate impact, high impact, and very strong impact.

The third section collects information aimed at evaluating the intangible costs with scale questions rated on the same six-point scale used for direct and indirect costs. These items comprise four dimensions:

- (1) Impact on family life, with eight items: conflicts and arguments, fights, communication difficulties, decreased shared activities, loss of friends or neighbours, elimination and/or violation of rules and/or limits, changes in decision-making patterns in the family, and fewer expressions of affection.
- (2) Labour/occupational life impact, with eight items: reduced productivity, work errors, irresponsibility, deterioration of communication skills in the workplace, conflicts with peers, conflicts with superiors, absenteeism, and loss of job.
- (3) Impact at the emotional level, with seven items: irritability, depression, insomnia/hypersomnia, emotional lability (fragility), impaired concentration, low tolerance to frustration, and anxiety and stress.
- (4) Free time and lifestyle, with seven items: loss of personal interests, anhedonia, loss of places for socialization, alcohol consumption, initiation of illegal PAS or psychotropic drug use in other family members, isolation and breakdown of emotional ties, and marked changes in lifestyle.

Participants

Data was collected from the families of 515 people treated for problematic PAS, which was reduced to 441 after excluding questionnaires with inconsistencies in their data.

Table 1 shows the main characteristics of the patients, as reported by the family member who filled out the questionnaire.

Table 1

Characteristics of the Substance Users, as Reported by Family Members

Age group	%	Socioeconomic stratum	%
14 to 16	21.7	1	19.7
17 to 20	26.7	2	41.0
21 to 27	26.4	3	22.4
28 to 62	25.2	4 to 6	16.8
Family members they live with	%	Substances consumed	%
Mother	52.8	Marijuana	76.7
Brothers	31.1	Alcohol	35.0
Partner	23.4	Cocaine	21.2
Father	22.4	Basuco	19.3
Children	19.0	Medicines	7.4
Others	14.3	Years of consumption	%
Grandparents	6.3	0 to 2	29.3
Uncles	2.9	3 to 5	23.8
Cousins	2.3	6 to 9	21.0
		10 to 42	26.0

Data Analysis

First, 74 outliers were identified and excluded from the final analysis.

Subsequent processing was done with the R statistical package and consisted of a descriptive analysis of the averages of income and expenses according to the users' socioeconomic stratum, age, and time of consumption. In a second stage, the correlations between socioeconomic stratum, income and the different expenditure categories were calculated.

Results

The data referring to expenses are averages in Colombian pesos (COP) and converted to International dollars (see note 3). As shown in Table 2, the costs of treatments for families were double their income in stratum 1, around triple in strata 2 and 3, and eight times in strata 4, 5 and 6.

In the first three strata, debts were slightly higher than income, but in stratum 4 they were more than 3 times the income, and in the 5th and 6th strata they were around 50% higher. The legal costs in strata 1 and 2 were approximately half of their income, and about equal in stratum 3; but in strata 4, 5 and 6 they are notably inferior, and are even smaller than in the lower strata.

Table 2

Average Income and Costs According to Economic Stratum

Category	Currency	Stratum 1	Stratum 2	Stratum 3	Strata 4 to 6
Income	COP	\$564,867	\$784,658	\$1,821,407	\$3,918,358
	Intl. \$	\$418.70	\$581.70	\$1,350.20	\$2,904.60
Treatment Costs	COP	\$1,007,738	\$2,145,976	\$5,297,204	\$24,744,706
	Intl. \$	\$747.00	1,590,8	\$3,926.70	\$18,342.90
Debts	COP	\$635,625	\$911,737	\$2,108,438	\$9,111,250
	Intl. \$	\$471.20	\$675.90	\$1,563.00	\$6,754.00
Legal Costs	COP	\$326,744	\$368,927	\$347,605	\$176,389
	Intl. \$	\$242.20	\$273.50	\$257.70	\$130.80
Accidents	COP	\$72,093	\$37,360	\$419,293	\$532,394
	Intl. \$	\$53.40	\$27.70	\$310.80	\$394.70
Theft/Property damage	COP	\$1,669,359	\$396,708	\$1,521,818	\$1,642,088
	Intl. \$	\$1,237.50	294,1	\$1,128.10	\$1,217.30
Theft/Damage to others	COP	\$1,339,885	\$745,598	\$1,511,364	\$7,213,676
	Intl. \$	\$993.20	\$552.70	\$1,120.40	\$5,347.40
Academic failure	COP	\$617,245	\$1,026,933	\$3,917,818	\$8,110,894
	Intl. \$	\$457.60	\$761.20	\$2,904.20	\$6,012.50

The costs for accidents were relatively low across the board. By contrast, theft and property damage are more serious in stratum 1, in stratum 2 they are half of the income, and in stratum 3 they are a little below monthly income.

Regarding theft and damage to others, costs in stratum 1 are around three times the income and are lower in strata 4 through 6. Meanwhile, the costs of school failure in stratum 1 and 2 are slightly above incomes, double in stratum 3, and are lower in the upper strata.

The highest costs were associated with theft and property damage in stratum 1. In strata 2, 3, 4, and 6 it was treatment costs, debts, and school failure. And in stratum 5 the highest costs were related to theft and damage to others.

Table 3

Average Monthly Income and Costs by Age Group

Category	Currency	Age 14 to 16	Age 17 to 20	Age 21 to 27	Age 28 to 62
Income	COP	\$900,108	\$1,380,676	\$1,788,221	\$1,967,297
	Intl. \$	\$667.20	\$1,023.50	\$1,325.60	\$1,458.30
Treatment Costs	COP	\$1,940,830	\$2,741,471	\$7,263,762	\$14,232,547
	Intl. \$	\$1,438.70	\$2,032.20	\$5,384.50	\$10,550.40
Debts	COP	\$667,241	\$1,883,686	\$2,502,000	\$5,341,471
	Intl. \$	\$494.60	\$1,396.30	\$1,854.70	\$3,959.50
Legal Costs	COP	\$101,705	\$342,342	\$299,245	\$576,864
	Intl. \$	\$75.40	\$253.80	\$221.80	\$427.60
Accidents	COP	\$44,944	\$118,727	\$218,056	\$486,321
	Intl. \$	\$33.30	\$88.00	\$161.60	\$360.50
Theft/Property damage	COP	\$244,294	\$1,522,345	\$691,212	\$2,067,029
	Intl. \$	\$181.10	1,128.5	\$512.40	\$1,532.30
Theft/Damage to others	COP	\$167,047	\$1,522,768	\$511,505	\$6,532,000
	Intl. \$	\$123.80	\$1,128.80	\$379.20	\$4,842.10
Academic failure	COP	\$885,748	\$2,345,725	\$3,628,559	\$4,433,028
	Intl. \$	\$656.60	\$1,738.80	\$2,689.80	\$3,286.10

As expected, the families that spent most on treatment were those of the older patients. For those age 14 to 20 the treatment costs were about equivalent to the family income. But for those 21 to 27 they were four times

the income—and seven times in the 28 to 62 age group. The same pattern is found in debts data, they grow with increasing age. In the 14 to 16 age group debts are lower than income, but in the other three age groups they are higher—the last being the most affected at 2.5 times the income. Legal expenses and traffic accidents remained the same proportion, but in all cases were lower than the income. In theft and property damage the most affected families were those of patients between 17 to 20 and between 28 to 62 years old, but the impact is not very large compared to other categories: about the equivalent of monthly income. The same proportion appears in theft and damage to others, though the impact was much greater in the group of older people. In the academic failure category, the costs increased progressively with age; approximately twice the income for the oldest age group.

Table 4

Average Income and Costs by Years of Consumption

Category	Currency	Years of Consumption			
		0 to 2	3 to 5	6 to 9	10 to 42
Income	COP	\$997,640	\$1,807,699	\$1,454,988	\$1,934,739
	Intl. \$	\$739.50	\$1,340.00	\$1,078.60	\$14,342.00
Treatment Costs	COP	\$6,658,274	\$3,716,011	\$7,932,500	\$8,159,245
	Intl. \$	\$4,935.70	\$2,754.60	\$5,880.20	\$6,048.30
Debts	COP	\$2,473,564	\$2,677,204	\$2,615,238	\$2,907,714
	Intl. \$	\$1,833.60	\$198.60	\$1,938.60	\$2,155.40
Legal Costs	COP	\$192,500	\$252,813	\$712,791	\$285,758
	Intl. \$	\$142.70	\$187.40	\$528.40	\$211.80
Accidents	COP	\$62,397	\$182,062	\$232,558	\$430,734
	Intl. \$	\$46.30	\$135.00	\$172.40	\$319.30
Theft/Property damage	COP	\$976,360	\$537,011	\$1,021,415	\$2,063,166
	Intl. \$	\$723.80	\$398.10	\$757.20	\$1,529.40
Theft/Damage to others	COP	\$1,109,154	\$614,003	\$446,614	\$6,401,762
	Intl. \$	\$822.20	\$455.20	\$331.10	\$4,745.50
Academic failure	COP	\$3,611,924	\$1,892,016	\$4,390,068	\$1,800,009
	Intl. \$	\$2,677.50	\$1,402.50	\$3,254.30	\$1,334.30

As shown in Table 4, those between 0 and 2 years of consumption had treatment expenses almost seven times higher than income; debts were about two and a half times income; legal expenses and accidents were relatively small; theft and property damage was about equal to income; theft and damage others were slightly higher than income; and school failure was almost four times income.

In the group with 3 to 5 years of consumption, treatment costs were twice the monthly income; debts were higher than income; academic failure costs were about equivalent to monthly income, while legal problems, accidents and theft were relatively lower costs.

For those between 6 and 9 years of consumption, treatment costs were five times income, debts were 50% higher than income, legal costs were about half, and academic failure were about three times income, while accident costs and theft/property damage were not significant.

Finally, for patients with between 10 and 42 years of use, treatment costs were four times monthly income, debts were 50% higher than income, theft/property damage costs were about equivalent to a monthly income, theft and damage to others were triple, and school failure is slightly less than an income, while legal costs and traffic accident costs were relatively low.

Correlations

To establish the degree of association between these economic variables, Pearson correlation coefficients were calculated. The strongest correlations were between (a) treatment expenses and debt (.87), and (b) treatment expenses and expenses for school failure (.82). There were also high correlations between legal expenses and accident expenses (.74), debts and expenses from school failure (.70), and between theft and damage to one's own home and third-party property (.69). Expenses did not correlate significantly with stratum or income, implying they probably depend much more on the severity of the events associated with the substance use.

Table 5*Correlations Between Expense Categories*

Categories	Socioeconomic Stratum	Income	Treatment Costs	Debts	Legal Costs	Accidents	Theft / damage to property	Theft / damage to others	Academic failure
Socioeconomic Stratum	1.00	.40	.28	.21	.02	.17	.04	.10	.14
Income	.40	1.00	.20	.10	.01	.08	.04	.10	.02
Treatment Costs	.28	.20	1.00	.87	.01	.15	.11	.16	.82
Debts	.21	.10	.87	1.00	.09	.18	.29	.40	.70
Legal Costs	.02	.01	.01	.09	1.00	.74	.39	.07	.28
Accidents	.17	.08	.15	.18	.74	1.00	.32	.10	.23
Theft / damage to property	.04	.04	.11	.29	.39	.32	1.00	.69	.10
Theft / damage to others	.10	.10	.16	.40	.07	.10	.69	1.00	0
Academic failure	.14	.02	.82	.70	.28	.23	.10	0	1.00

Conclusions and Discussion

The lack of specific studies on this subject has not allow for comparisons, as there are too many gaps (Orford et al. 2013). Only Copello et al. (2009, 2010) were able to present a cost calculation, which they considered to be provisional and incomplete. The conclusions proposed here are also of a provisional character, pending the accumulation of further research. But there is no doubt that the impact of having a substance user in the family on the household economy is considerable, despite the possibility

of free treatment in state recognized institutions becoming available in the last five years in Colombia.

The three factors considered in this work were socioeconomic level, age and time of consumption. The analysis of 441 cases showed the following:

By socioeconomic level, having a consumer in the family affects expenses significantly. In all cases, direct costs were more than twice the monthly income, reaching up to six times in the upper strata. This coincides with Burke (1998), who states that medical care for families with drug users are doubled. Indirect costs were between four and eight times the monthly income, but particularly high for the lower strata. The most important finding is the sum of direct and indirect costs: total costs for stratum 1 were 10 times the monthly income; seven times for stratum 2, nine times for stratum 3, and 13 times for the upper strata. This means that the indirect costs were higher than the direct costs. This aligns with the findings of Ray and Weisner (2009) in a more recent study; although it is not possible to compare it with Colombia because we do not have medical care studies of relatives with asthma and diabetes, it is possible to identify a fairly high level of expenditure in health care costs for psychoactive substance users, which is the case that interests us in this study.

With respect to debts, these were between 50% and 150% of income. Legal expenses were relatively small (less than a monthly income), which leads us to believe that the problems that arise are solved in different ways than the legal processes, as it is the case in other countries (for example, in the United States): these ways include personal arrangements or even personal conflicts, without the intervention of lawyers or tribunals. These categories, along with traffic accidents, were also studied by Bouchery et al. (2011), NIDA (2020), and the Australian Institute of Health and Welfare (2020), among others, and are defined as part of criminal justice expenses. For us, these are part of the indirect costs.

Traffic accidents did not seem to have a major economic impact on our participants, probably because a large proportion of them were from lower socioeconomic strata, who are less likely to have a car. Thefts had much more impact, especially in the lowest (where replacing items is difficult) and highest strata (who own more expensive things to be stolen). The impact of academic failure was greater in the upper strata because they tend to send their children to private universities in Colombia. However, even the public universities receive only those who have the best education, so they are also relatively advantaged people.

Strata 2 through 6 had very high treatment, debt and academic failure costs, while people from stratum 1 particularly suffered from theft and property damage. Perhaps the explanation is related, in the case of those with fewer resources, to the fact that infractions of the law are committed to obtain resources that allow them to continue using drugs (among other things).

With respect to age, the older the patient, the higher both the debt and treatment costs were. This is consistent with the fact that substance-dependent people tend to have many treatments over time, which is why their families have to go into debt to cover the costs.

The treatment costs of problematic users of drugs and alcohol have increased a lot in recent times. The offer of good quality treatments paid by the State and destined for people with limited resources led to the myriad low and moderate-cost treatment centers that had proliferated for a long time to be greatly reduced in number, while the private institutions with high costs that cater to wealthier families remained. This component is the one closest to the category proposed by Rogero (2010) and Ripari et al. (2012), who defined direct costs as general costs, and considered it to include costs derived from care only (rehabilitation and treatment) Hervás et al. (2007) considered, as we do, that this form of measurement is incomplete, underestimating the value of caregiving tasks exercised by relatives of this population group.

These conclusions must be confirmed or rejected with more data. But for now, they show that even with new rules that offer free treatment to anyone who requests it, the costs to families are still substantial.

Limitations

As a pioneering study, there are many adjustments that needed to be made. The obligation to resort to virtual means during the COVID pandemic produced the introduction of information that rendered the data unusable in about 10% of the cases. For example, some people wrote something like “70” for income, and it was not known to what value they were referring. In other cases the data were inconsistent in the opposite sense, as the respondents claimed to have quite high incomes, but they lived in very poor areas of the cities involved.

In this first data collection, the sex of the substance using relative was not asked for. This was a mistake, since it would have allowed new questions to be investigated and has since been.

The study is also not sufficiently representative of all socioeconomic strata: the wealthiest are underrepresented, so it was necessary to group strata 4, 5 and 6 together.

Note 1: There is some confusion in the use of concepts in this area. Some authors call indirect costs the intangible costs; we consider it clearer to treat them separately as we do here.

Note 2: In Colombia there are six socioeconomic strata, based on the classification of the households, through various criteria that do not depend on the income of a person or a family: it is based in housing conditions and the area of the city where the dwelling is located. This classification is

intended to offer benefits in terms of taxes and public services to the most disadvantaged, but its validity has been questioned.

Note 3: For a better comprehension we converted the COP to International Dollar (1 Intl. \$ = 1,349 COP), based on the Purchasing Power Parity Exchange Rate; the minimal wage in Colombia is USD 300, and 43% of the households live with it; but the local purchasing power is near triple that money in the US.

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Availability of data and material

The data that support the findings of the present study are available from the corresponding author upon reasonable request.

Conflict of Interest

The authors declare no conflict of interest.

Author's contributions

All authors significantly contributed to the research and preparation of manuscript.

Informed Consent

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000. Informed consent was obtained from all participants for being included in the study.

Ethics Approval

The project was evaluated and approved by the Ethical Board of Nuevos Rumbos under code 0046-16102019.

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