WILEY

ENABLING DISCOVERY | POWERING EDUCATION | SHAPING WORKFORCES

Periodontitis E-learning Modules for Nurses

Periodontitis Knowledge Hub

Are you able to educate your patients with gum disease? Assess your your knowledge of gingivitis and periodontitis to enhance the treatment and care of patients with diabetes, cardiovascular disease, cognitive decline, and pregnancy.

"Gum disease is a threat to health that can cause serious complications. This site is an effective way to learn how vital good dental health is to patient health" Professor Debra Jackson AO RN PhD FRCSI SFHEA FCNA
Editor-in-Chief, *Journal of Advanced Nursing*

Visit the knowledge hub to access e-learning modules:

Pregnancy & Periodontitis

Cognitive Decline & Periodontitis

Cardiovascular Diseases & Periodontitis

Diabetes & Periodontitis

Access now

This Knowledge Hub is supported by Oral B.

Check for updates

Received: 14 July 2021 | Revised: 24 September 2021 | Accepted: 4 November 2021

DOI: 10.1111/jan.15100

ORIGINAL RESEARCH:
EMPIRICAL RESEARCH - QUANTITATIVE

JAN Leading Global Nursing Research | WILEY

Internal developmental assets and substance use among Hispanic adolescents. A cross-sectional study

Maider Belintxon[1,2] | María Calatrava[2,3] | Alfonso Osorio[2,3,4] | Álvaro Balaguer[4] | Marta Vidaurreta[1,2]

[1]School of Nursing, Department of Community, Maternity and Pediatric Nursing, Universidad de Navarra, Pamplona, Spain

[2]IdiSNA, Navarra Institute for Health Research, Pamplona, Spain

[3]Institute for Culture and Society, Universidad de Navarra, Pamplona, Spain

[4]School of Education and Psychology, Universidad de Navarra, Pamplona, Spain

Correspondence
María Calatrava, Institute for Culture and Society, Universidad de Navarra, Pamplona, Spain.
Email: mcalatrava@unav.es

Funding information
This study was supported by PIUNA (University of Navarra, Spain).

Abstract

Aims: To determine the associations between internal assets (planning and decision-making, interpersonal competence and commitment to learning) and substance use (tobacco, alcohol, binge drinking, marijuana use and other drugs).

Design: A cross-sectional study was conducted in four countries (Chile, Mexico, Spain and Peru).

Methods: Adolescents aged 12–18 self-completed a multi-purpose questionnaire between 2016 and 2019. Multiple logistic regressions and structural equation models were performed to analyse the association between internal assets (planning and decision-making, interpersonal competence, and commitment to learning) and substance use.

Results: The results indicate that planning and decision-making and commitment to learning are conducive to the prevention of substance use. On the contrary, interpersonal competence was not associated with substance use.

Conclusion: The present study shows that planning and decision-making and commitment to learning can be relevant factors in explaining substance use during adolescence. Internal assets can be an important aspect to include in health promotion interventions with children, youth and families to prevent substance use. These findings may be useful for researchers, schools, paediatric nurse practitioners, and health professionals in general to design health programs focused on children and adolescents. Furthermore, the Developmental Assets framework has been proved as a suitable frame of reference for paediatric nurse practitioners to assess and develop child and adolescent positive development and design health promotion interventions to prevent substance use.

KEYWORDS
adolescent health, health education, nurse education, substance abuse

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.
© 2021 The Authors. *Journal of Advanced Nursing* published by John Wiley & Sons Ltd.

1 | INTRODUCTION

Alcohol, tobacco and other drugs (cannabis, ecstasy, amphetamine) have been the most widely used toxic substances among young people in the last 20 years (El Kazdouh et al., 2018; European Monitoring Centre for Drugs and Drug Addiction & European School Survey Project on Alcohol and Other Drugs, 2020) with increasing prevalence (Bendaou et al., 2018; European Monitoring Centre for Drugs and Drug Addiction & European School Survey Project on Alcohol and Other Drugs, 2020; Hongthong & Areesantichai, 2014; Luecha et al., 2019; World Health Organization, 2018).

Studies show that 37%–68% of adolescents (13–17 years old) from various Latin American countries have already used tobacco, 43–80% have consumed alcohol and between 4 and 23% have taken marijuana (Comision interamericana para el control del abuso de drogas, 2010; Pérez et al., 2018). As for young Spaniards, 78% have used alcohol, 41% tobacco0 and 33% cannabis; the latter having become the third most-used drug (Observatorio Español de las Drogas y las Adicciones, 2021). This data explains why this is a major public health concern worldwide (European Monitoring Centre for Drugs and Drug Addiction & European School Survey Project on Alcohol and Other Drugs, 2020; Su et al., 2018; World Health Organization, 2018).

Previous studies have demonstrated that substance use, specifically when it begins as early as adolescence (Chatterjee et al., 2018), increases the risk of future health problems (Chatterjee et al., 2018; El Kazdouh et al., 2018; Oman et al., 2004). Moreover, it is important to note that behaviours or lifestyles adopted during adolescence are difficult to modify in adulthood (Bendaou et al., 2018; Su et al., 2018). Therefore, acquiring healthy lifestyle at these ages is a key to avoid negative consequences in young people, in both the short- and the long-term.

Thus, the prevalence of alcohol and other drug use throughout life, and the consequences associated with its use, is a priority focus of action for nurses due to the global burden associated with substance use (Finnell et al., 2019). Nurses have an important role as promoters of public health issues among individuals and community (Kemppainen et al., 2013). They have competences and are trained to deal with holistic health needs of individuals and the implications of substance use on health, to diminish possible harms, and to boost wellness (Tierney et al., 2020). Specifically, in the context of substance use, nurses are important providers of the treatment due to their knowledge of the disease complexity, which includes neurobiological, psychosocial and spiritual factors that lead to maladaptive behaviours in the patient (International Nurses Society on Addictions & American Nurses Association, 2013). In fact, recent research has proven nurses' skills in health and development, detection and prevention of disease and risk behaviour among child and adolescent population (Laserna Jimenez et al., 2021). Paediatric nurse practitioners (PNPs), defined as an advanced practice registered nurse specialized in caring form new-borns to young adults, could be the best option to address substance use topics to youth (Daley et al., 2020). PNPs offer high-quality care focused on the patient and their family. Therefore, they possess vast knowledge about children and adolescents as well as necessary skills to provide care to children, adolescents and their families (Aruda et al., 2016).

Impact

What problem does the study address?

This study addresses the influence of developmental internal assets on substance use among adolescents.

What are the main findings?

The internal developmental assets (planning and decision-making and commitment to learning) are conducive to the prevention of substance use.

What will the research has impact on?

The research will have an impact on the design of preventive public healthcare programs for children and youth. Researchers, schools, paediatric nurse practitioners, and health professionals, in general, should take account of these findings to provide health care to children and adolescents.

1.1 | Background

A new paradigm has appeared in recent years according to which, far from focusing on pathology and on identifying the problems and disorders of adolescence (Bleck & DeBate, 2016; Shek et al., 2019), are centred on promoting the key positive factors and elements in adolescent development. The ultimate purpose of this paradigm is to contribute to improving adolescent health and well-being by promoting healthier lifestyles and reducing risky behaviours at these ages (Oman et al., 2004; Scales et al., 2017). In addition, the significance of understanding how positive factors influence adolescent risk behaviours could help PNPs to provide health care to children and adolescents and design good health intervention programs (Wang et al., 2010). PNPs promote well-being, prevent risky behaviours, and promote children and adolescent health. The scope of their activity includes conducting clinical and developmental assessments, addressing common childhood and adolescent illnesses and helping families to recognize their own health needs (Jackson et al., 2001). Therefore, this framework also can be an innovative approach for PNPs in improving health-promoting behaviours among adolescents (Wang et al., 2011).

This new approach, called 'Positive Youth development' (PYD), besides defining the competences that lead to healthy development (Bleck & DeBate, 2016), is associated with the notion of developmental assets (Oman et al., 2004; Leffert et al., 1998; Scales

et al., 2012). Developmental assets form a theoretical construct that identifies a range of individual strengths and resources that improve the health outcomes of children and adolescents and reduce their risky behaviours (Benson, 2007; Benson et al., 2011; Search Institute, 2007; Su et al., 2018). Specifically, 40 developmental assets were proposed: 20 external assets and 20 internal assets (Bleck & DeBate, 2016; Leffert et al., 1998; Scales & Leffert, 2004; Search Institute, 2007; Shek et al., 2019). External assets refer to the positive experiences, personal boundaries, opportunities and support the environment offers the adolescent, and which stimulate positive development (Search Institute, 2007). On the other hand, internal assets are constructs that reflect the adolescent's skills and competences, emphasizing an approach based on the his/her strengths (Forster et al., 2019; Search Institute, 2014). The 20 internal assets are grouped into four categories: commitment to learning, positive values, social competence and positive identity.

It should be noted that in the last two decades the literature on risk factors and on the health determinants has grown exponentially (Stone et al., 2012). Literature shows that developmental assets play a key role in preventing risk behaviours (Benson et al., 1998; Benson, 1997; Benson, 2007; Bleck & Debate., 2016; Chatterjee et al., 2018; Leffert et al., 1998; Oman et al., 2004; Paakkari et al., 2019; Scales et al., 2003). The American Academy of Pediatrics pointed out the need to use tools for substance use screening; these tools would help prevent substance use, achieve early identification, increase treatment referral and prevent later disorders (AAP Committee on Practice & Ambulatory Medicine, AAP Bright Futures Periodicity Schedule Workgroup, 2017). Using the developmental assets framework can be a response to this need. Despite this priority being highlighted, less than 50% of health professionals use validated tools to screen the use of tobacco, alcohol and other drugs. Recent studies show that this may be due to the lack of training and thus limited knowledge about such tools (Connors et al., 2019). The developmental assets can help as a tool for health professionals, and specifically for PNPs, in substance use prevention.

Previous studies based on this framework mainly have addressed external assets such as family communication or support (Belintxon et al., 2020; Oman et al., 2004). Only some assets considered internal, which are linked more to the positive identity of the adolescent, have received greater attention in studies (Oman et al., 2004; Paakkari et al., 2019; Search Institute, 2007). However, assets in the framework of social competence (Oman et al., 2004; Paakkari et al., 2019) and commitment to learning have not been much explored.

The Search Institute has identified social competence as a category in internal assets and has defined it as those skills that the adolescent needs to establish effective interpersonal relationships, to plan and to make decisions. Furthermore, it refers to cultural competence, the skill of tolerance and peaceful conflict resolution (Search Institute, 2007, 2014; Shek et al., 2019). Recent studies have associated high levels of social competence with lower use of substances among minors (Benson, 2007; Chen et al., 2019; Duncan et al., 2019; Search Institute, 2014; Westling et al., 2012). In social competences, assets concerning 'interpersonal competence' (Domitrovich et al., 2017; Epstein et al., 2000; Oman et al., 2004) and 'planning and decision-making' (Epstein et al., 2000; Sloboda et al., 2009) have been explored to a lesser extent in association with substance use.

As we have mentioned, another of the categories of the developmental internal assets that have not been studied much is that of 'commitment to learning'. This category refers to a lifelong learning and to the adolescent's belief in his/her abilities, including motivation gained from his/her achievements, commitment to and concern for his/her school, doing homework and reading for pleasure (Search Institute, 2007). Recent studies have shown that greater commitment to learning reduces substance use among adolescents (Benson, 2007; Mak & Fancourt, 2020b; Messer et al., 2021; Search Institute, 2014; Stone et al., 2012) and vice versa (Manrique-Millones et al., 2021). Specifically, homework (Griffin et al., 2000) and reading for pleasure (Mak & Fancourt, 2020b) have proven to be potentially relevant.

So far, few studies have analysed the influence of planning and decision-making, interpersonal competence and commitment to learning (following the developmental assets approach introduced by the Search Institute) on substance use during adolescence. Moreover, most of them have used American samples (Benson, 2007; Messer et al., 2021; Oman et al., 2004; Scales et al., 2017; Search Institute, 2014). This entails a cultural gap in the study of these variables among Hispanic adolescents.

2 | THE STUDY

2.1 | Aims

This paper therefore aims to:

- Analyse the planning and decision-making, interpersonal competence and commitment to learning variable and examine whether they differ according to the sex, age, country, family structure and religiosity of the adolescent.
- Explore the connection between such internal assets (planning and decision-making, interpersonal competence and commitment to learning) and substance use (tobacco, alcohol, binge drinking, marijuana and other drugs) in a sample of adolescents from Spanish-speaking countries.

2.2 | Design

The aforementioned objectives were pursued by analysing the data from an international research project called YOUR LIFE were analysed (Belintxon et al., 2020; Carlos et al., 2016). This project's main objective is to identify the opinions, knowledge and behaviours of secondary school students about their lifestyles and various aspects related to sexuality and relationships, as well as the factors influencing them. The cohort consists of more than 24,000 students from 10 countries. The project has a cross-sectional stage and a longitudinal

stage. We are currently starting the recruitment stage for the longitudinal follow-up of the participating schools.

This article uses cross-sectional data from four Spanish-speaking countries (Spain, Chile, Mexico and Peru).

2.3 | Sample/Participants

The data used in this study were collected in Peru, Chile, Spain and Mexico. A total of 8277 adolescents from 52 schools took part. Six hundred and fifty-six participants were excluded because they featured missing data in the age variable or for being under 12 years old or over 18 years old. Furthermore, 99 participants were removed because they did not state their sex. Finally, 767 participants were excluded because of missing data in the outcome variables (between 7.55% and 8.96% in each variable), and then a final sample of 6755 students was analysed (2225 from Peru, 864 from Chile, 1532 from Spain and 2134 from Mexico), which represented 81.6% of the initial sample. Of these, 57.7% were women and their average age was 17.7 years (SD = 1.53). This sample size is more than enough for both multiple regression and structural equation model (SEM) analyses.

2.4 | Data collection

The protocols set out in the YOUR LIFE project were used to collect the data (Belintxon et al., 2020; Carlos et al., 2016). Participants were invited via schools. All schools from Spanish-speaking countries were eligible. Participation was requested in the project's web page, and invitations were sent to as many schools as possible in the countries where the project has local collaborators. In each participating school, all secondary classes were eligible.

To reduce social-desirability bias, participants were explained that participation was anonymous, and school staff was instructed to avoid walking through the room while students were answering.

Data were collected between August 2016 and May 2019.

2.5 | Questionnaire and variables

An anonymous, self-administered online questionnaire was used to collect the data. It consisted of a multi-purpose questionnaire with questions about lifestyle variables and the adolescents' affective relationships. The items used for this study are described below.

2.5.1 | Developmental internal assets

Planning and decision-making

The questions about this asset were: 'How often do the following situations occur in your life': (1) 'I plan what I do', (2) 'I usually finish what I start', (3) 'I usually save'. A Likert-type scale was used with 5 answer options (from 0 = 'never', to 4 = 'always').

Interpersonal competence

The questions about this asset: 'How often do the following situations occur in your life': (1) 'I feel loved by others (friends, classmates, etc.)', (2) 'In my group of friends I feel free to say what I think', (3) 'At school I feel accepted by my classmates'. The questions had 5 possible answers (from 0 = 'never', to 4 = 'always').

Commitment to learning

The questions about this asset were: 'Between Monday and Thursday, approximately how long do you spend in total (over those 4 days) doing the following activities?': (1) 'Studying and doing homework (outside of school hours)', (2) 'Reading books'. 'Between Friday and Sunday, approximately how long do you usually spend in total (over those 3 days) doing the following activities?': (3) 'Studying and doing homework (outside of school hours)', (4) 'Reading books'. The questions had 6 possible answers (from 0 = 'none', to 6 = 'more than 10 h').

For each of these three assets, a variable was created with the average of the items, removing participants who left more than half the items unanswered. Subsequently, the variable was dichotomized into two categories, taking the median as the cut-off point.

2.5.2 | Substance use

Participants were asked how often they had used each of the following substances in the last 12 months: tobacco, alcohol, 5 or more alcoholic beverages in the course of a few hours, marijuana and other drugs (e.g., cocaine, designer drugs.). The questions had 5 possible answers (from 0 = 'never', to 4 = '3 or more days a week'). A new variable for each toxic substance was created by separating those that had 'never' used the substance from those that had ever used it. This decision was based on the scientific evidence that states that any use of these substances during adolescence is considered a risky behaviour (Centers for Disease Control & Prevention, 2021).

2.5.3 | Socio-demographic variables

Other variables such as age, sex and family structure were used in the analyses.

The levels of religiosity were assessed using various questions. First, participants were asked what their religion was. Those who stated they belonged to a religion were also asked how often they visited a church/temple of their religion and how often they prayed (from 0 = 'never', to '5 = more than once a week'). Participants also reported to what extent they agreed with the following statement: 'my faith is an important influence in my life, and I am willing to take it into account in making decisions' (from 0 = '*completely disagree*', to '4 = *completely agree*'). With all these items, a dichotomous variable called religiosity was created that had two categories (high religiosity and no/low religiosity). Highly religious participants were those who stated they had a religion, attended church weekly, prayed

weekly and considered faith a quite important or very important influence in their life. The other participants were allocated to the no/low religiosity category.

2.6 | Ethical considerations

Schools were provided with all the documentation required to obtain parents' permission. Each school handled parents' permission according to their own policies (Ruiz-Canela et al., 2013).

Students were informed about the survey 2 days before its completion, and just before it. They were told that participation was voluntary and anonymous, and that they could leave the survey at any time. They were also told that clicking the 'Start' button would imply their consent to participate.

The project was approved by the Ethics Committee of University of Navarra.

2.7 | Data analysis

The participants' characteristics are given as absolute frequencies and percentages, by country type.

Missing data were dropped from each specific analysis.

To determine what variables predict planning and decision-making, interpersonal competence and commitment to learning, the bivariate correlation (Chi-square test of frequency differences) between these variables and the socio-demographic variable (sex, age, country, family structure and religiosity) was analysed first. Then, three logistic regressions were performed with planning and decision-making, interpersonal competence and commitment to learning as dependent variables. All the aforementioned socio-demographic variables were included in each regression as independent variables.

Next, the association between the developmental assets (planning and decision-making, interpersonal competence and commitment to learning) and the different types of substances (tobacco, alcohol, binge drinking, marijuana and other drugs) were analysed. This was done using five different logistic regressions, one for each type of substance (the dependent variable in each regression). In all cases, the independent variables were the three internal assets and the socio-demographic variables.

Lastly, a SEM was performed to test all previous associations in a single model. 'Planning and decision-making' and 'commitment to learning' were introduced as latent variables, with their associated items, and placed as mediators between socio-demographic variables and substance use. Substance use was also a latent variable, which loaded into the five substance-related observed variables. 'Interpersonal competence' was not included in the model because previous analyses (regressions) did not support a relevant role of this variable. The SEM was run for the whole sample, and also separately for each country (except for Chile, where the sample was small for such a complex model).

The data were analysed using the statistical software Stata 12.1. A significance level of 0.05 was established.

2.8 | Validity and reliability/Rigour

The *Commitment to Learning* measure (4 items) obtained a Cronbach alpha of 0.70. Assets *Planning and decision making* and *Interpersonal Competence* belong to the social competencies category. An exploratory factor analysis was performed with these items. The two-factor structure was confirmed, with one factor containing the three items about *Planning and decision making*, and another factor containing the three items about *Interpersonal Competence*. *Planning and decision making* obtained a Composite Reliability (CR) = 0.801, an Average Variance Extracted (AVE) = 0.574 and a Cronbach's alpha = 0.581. *Interpersonal Competence* obtained a CR = 0.591, an AVE = 0.330 and a Cronbach's alpha = 0.803. Although some of these measures are not very high, this is normal given, the fact that each factor is composed of only three items.

3 | RESULTS/FINDINGS

The main characteristics of the sample can be seen in Table 1. Most of the students lived with their father and their mother (81.2%). Most of participants show low or no religiosity (67.7%). About substance use, 14.8% of participants had used tobacco, 32.5% had used alcohol, 15.8% had engaged in binge drinking, 5.7% had used marijuana and 3.0% had used other drugs.

Table 2 shows the association between socio-demographic variables and internal assets: planning and decision-making, interpersonal competence and commitment to learning. Our results indicate that being male, being older and being highly religious were associated with higher planning and decision-making competence. Spanish participants, those who lived with both parents and those who were highly religious recorded a higher score on interpersonal competence. Lastly, the data shows that being female, being Spanish, and being highly religious were associated with greater commitment to learning.

After this first analysis, logistic regressions were conducted between internal assets (the planning and decision-making, interpersonal competence and commitment to learning variables); the outcomes are shown in Table 3. Planning and decision-making was significantly associated with lower use of tobacco, alcohol, binge drinking and marijuana. However, no association was found with the use of other drugs. Commitment to learning was also significantly associated with lower use of tobacco, alcohol, binge drinking and marijuana, but not with the use of other drugs. Interpersonal competence was not associated with any substance use.

The analyses also showed other variables associated with substance use. Lower age and high religiosity were associated with lower use of all the substances. Additionally, being female was associated with lower use of tobacco, binge drinking, marijuana and other drugs.

TABLE 1 Characteristics of the sample

Characteristics	Peru *n* (%) *N* = 2225	Chile *n* (%) *N* = 864	Spain *n* (%) *N* = 1532	Mexico *n* (%) *N* = 2134	Total *n* (%) *N* = 6755
Sex					
Male	862 (38.7)	440 (50.9)	505 (33.0)	1053 (49.3)	2860 (42.3)
Female	1363 (61.3)	424 (49.1)	1027 (67.0)	1081 (50.7)	3895 (57.7)
Age (years)					
12–14	975 (43.8)	335 (38.8)	819 (53.5)	1029 (48.2)	3158 (43.8)
15–18	1250 (56.1)	529 (61.2)	713 (46.5)	1105 (51.8)	3597 (56.2)
Two-parent household					
No	332 (21.2)	190 (29.6)	143 (11.7)	286 (17.7)	951 (18.8)
Yes	1233 (78.8)	453 (70.5)	1078 (88.3)	1333 (82.3)	4097 (81.2)
Religiosity[a]					
None/Low	1469 (73.2)	601 (74.6)	965 (67.1)	1193 (59.9)	4228 (67.7)
High	537 (26.8)	205 (25.4)	473 (32.9)	800 (40.1)	2015 (32.3)
Tobacco use					
Never	1997 (89.8)	655 (75.8)	1295 (84.5)	1808 (84.7)	5755 (85.2)
Sometimes	228 (10.3)	209 (24.2)	237 (15.5)	326 (15.3)	1000 (14.8)
Alcohol use					
Never	1617 (72.7)	484 (56.0)	995 (65.0)	1460 (68.4)	4556 (67.5)
Sometimes	608 (27.3)	380 (44.0)	537 (35.1)	674 (31.6)	2199 (32.6)
Binge drinking					
Never	1954 (87.8)	666 (77.1)	1306 (85.3)	1764 (82.7)	5690 (84.2)
Sometimes	271 (12.2)	198 (22.9)	226 (14.8)	370 (17.3)	1065 (15.8)
Marijuana use					
Never	2150 (96.6)	748 (86.6)	1446 (94.4)	2027 (95.0)	6371 (94.3)
Sometimes	75 (3.4)	116 (13.4)	86 (5.6)	107 (5.0)	384 (5.7)
Other drugs					
Never	2167 (97.4)	829 (96.0)	1497 (97.7)	2058 (96.4)	6551 (97.0)
Sometimes	58 (2.6)	35 (4.1)	35 (2.3)	76 (3.6)	204 (3.0)
Planning and decision making					
Low	1198 (59.1)	495 (61.2)	878 (60.3)	1184 (58.8)	3755 (59.5)
High	828 (40.9)	314 (38.8)	579 (39.7)	831 (41.2)	2552 (40.5)
Interpersonal competence					
Low	1268 (63.4)	492 (61.7)	774 (54.0)	1176 (59.3)	3710 (59.7)
High	733 (36.6)	305 (38.3)	660 (46.0)	808 (40.7)	2506 (40.3)
Commitment to learning					
Low	1102 (49.6)	553 (64.4)	662 (43.3)	1468 (68.9)	3785 (56.2)
High	1118 (50.4)	306 (35.6)	866 (56.7)	662 (31.1)	2952 (43.8)

[a]High religiosity refers to those with a religion, with a weekly or more frequent church attendance, who consider their faith important or very important. Those who did not meet these three criteria were coded as 'None/low religiosity'.

Lastly, the structural equation model obtained excellent adjustment indexes: $\chi^2 = 377.729$, df = 75, RMSEA = 0.29 (90% CI = 0.026–0.032), CFI = 0.983, TLI = 0.974, SRMR = 0.026. The model can be seen in Figure 1. Both planning and decision-making and commitment to learning are shown to be protective factors against substance use and as mediators between socio-demographic variables and substance use. The model also achieved excellent fit indices for each country (RMSEA ≤ 0.034; CFI ≥ 0.976; TLI ≥ 0.963; SRMR ≤ 0.037).

4 | DISCUSSION

4.1 | Developmental assets

This study seems to indicate that some internal developmental assets are associated with low substance use during adolescence. These results are in line with conclusions of previous studies about the protective role of other internal assets about substance use (Benson, 2007;

TABLE 2 Variables associated with planning and decision-making, interpersonal competence and commitment to learning

	High planning and decision-making				High interpersonal competence				High commitment to learning			
	N	*n* (%)	*p*[a]	OR (95% CI)[b]	*N*	*n* (%)	*p*[a]	OR (95% CI)[b]	*N*	*n* (%)	*p*[a]	OR (95% CI)[b]
Sex												
Male	2658	1154 (43.4)	<0.001	(ref)	2609	1052 (40.3)	0.993	(ref)	2851	961 (33.7)	<0.001	(ref)
Female	3649	1398 (38.3)		0.75 (0.67–0.84)	3607	1454 (40.3)		1.03 (0.92–1.16)	3886	1991 (51.2)		1.90 (1.68–2.14)
Age												
12–14	3027	1140 (37.7)	<0.001	(ref)	2993	1241 (41.5)	0.075	(ref)	3149	1318 (41.9)	0.002	(ref)
15–18	3280	1412 (43.1)		1.24 (1.10–1.39)	3223	1265 (39.3)		0.95 (0.84–1.07)	3588	1634 (45.5)		1.06 (0.94–1.19)
Country												
Peru	2026	828 (40.9)	0.599	(ref)	2001	733 (36.6)	<0.001	(ref)	2220	1118 (50.4)	<0.001	(ref)
Chile	809	314 (38.8)		0.85 (0.70–1.04)	797	305 (38.3)		0.99 (0.81–1.02)	859	306 (35.6)		0.55 (0.45–0.67)
Spain	1457	579 (39.7)		0.93 (0.80–1.09)	1434	660 (46.0)		1.28 (1.10–1.50)	1528	8668 (56.7)		1.22 (1.04–1.42)
Mexico	2015	831 (41.2)		0.90 (0.78–1.04)	1984	808 (40.7)		0.98 (0.84–1.13)	2130	662 (31.1)		0.45 (0.38–0.52)
Two-parent household[c]												
No	926	331 (35.8)	<0.008	(ref)	913	280 (30.7)	<0.001	(ref)	944	376 (39.8)	0.05	(ref)
Yes	4061	1645 (40.5)		1.16 (0.99–1.35)	4003	1739 (43.4)		1.60 (1.36–1.87)	4091	1770 (43.2)		1.09 (0.94–1.28)
Religiosity												
None/Low	4189	1573 (37.6)	<0.001	(ref)	4140	1505 (36.4)	<0.001	(ref)	4216	1763 (41.82)	<0.001	(ref)
High	2001	936 (46.8)		1.31 (1.16–1.49)	1978	961 (48.6)		1.49 (1.31–1.69)	2011	983 (48.9)		1.42 (1.25–1.62)

Abbreviation: ref=reference.

[a]*p* values of the bivariate χ^2 tests.

[b]Multiple logistic regression odds ratios (and 95% confidence intervals) of high planning and decision-making, interpersonal competence and commitment to learning, adjusted for all the variables in the table.

[c]Two-parent household: refers to when the adolescent refers he/she lives with both parents.

TABLE 3 Variables associated with tobacco, alcohol, binge drinking, cannabis and other drugs

	Tobacco[a]				Alcohol use[a]			Binge drinking[a]			Marijuana[a]			Other drugs[a]		
	N	*n* (%)	*p*[b]	OR (95% CI)[c]	*n* (%)	*p*[b]	OR (95% CI)[c]	*n* (%)	*p*[d]	OR (95% CI)[c]	*n* (%)	*p*[b]	OR (95% CI)[c]	*n* (%)	*p*[b]	OR (95% CI)[c]
Planning and decision-making																
Low	3755	610 (16.3)	<0.001	(ref)	1304 (34.7)	<0.001	(ref)	663 (17.7)	<0.001	(ref)	233 (6.2)	<0.001	(ref)	116 (3.1)	0.015	(ref)
High	2552	303 (11.9)		0.68 (0.56–0.83)	736 (28.8)		0.69 (0.59–0.80)	328 (12.9)		0.60 (0.49–0.74)	103 (4.0)		0.71 (0.51–0.98)	53 (2.1)		0.71 (0.46–1.09)
Interpersonal competence																
Low	3710	545 (14.7)	0.214	(ref)	1205 (32.5)	0.669	(ref)	576 (15.5)	0.968	(ref)	212 (5.7)	<0.05	(ref)	111 (3.0)	0.015	(ref)
High	2506	340 (13.6)		0.98 (0.81–1.19)	801 (32.0)		0.98 (0.85–1.14)	390 (15.6)		1.02 (0.84–1.25)	110 (4.4)		0.92 (0.68–1.26)	50 (2.0)		1.01 (0.66–1.53)
Commitment to learning																
Low	3785	630 (16.6)	<0.001	(ref)	1278 (33.8)	<0.05	(ref)	682 (18.0)	<0.001	(ref)	266 (7.0)	<0.001	(ref)	131 (3.5)	0.007	(ref)
High	2952	364 (12.3)		0.69 (0.56–0.84)	915 (31.0)		0.84 (0.72–0.98)	378 (12.8)		0.76 (0.62–0.94)	114 (3.9)		0.51 (0.36–0.72)	69 (2.3)		0.84 (0.54–1.31)
Sex																
Male	2860	516 (18.0)	<0.001	(ref)	1014 (35.5)	<0.001	(ref)	574 (20.1)	<0.001	(ref)	215 (7.5)	<0.001	(ref)	134 (4.7)	<0.001	(ref)
Female	3895	484 (12.4)		0.77 (0.63–0.9)	1185 (30.4)		0.80 (0.69–0.93)	491 (12.6)		0.60 (0.50–0.73)	169 (4.3)		0.72 (0.53–0.97)	70 (1.8)		0.48 (0.32–0.72)
Age (years)																
12–14	3158	200 (6.3)	<0.001	(ref)	416 (13.2)	<0.001	(ref)	160 (5.1)	<0.001	(ref)	96 (3.0)	<0.001	(ref)	72 (2.3)	0.001	(ref)
15–18	3597	800 (2.2)		3.76 (3.09–4.57)	1783 (49.6)		5.66 (4.90–6.55)	905 (25.2)		5.68 (4.60–7.02)	288 (8.0)		2.47 (1.83–3.34)	131 (3.6)		1.26 (0.85–1.88)
Country																
Peru	2225	228 (10.3)	<0.001	(ref)	608 (27.3)	<0.001	(ref)	271 (12.2)	<0.001	(ref)	75 (3.4)	<0.001	(ref)	58 (2.6)	<0.05	(ref)
Chile	864	209 (24.2)		2.96 (2.23–3.92)	380 (44.0)		1.86 (1.49–2.33)	198 (22.9)		1.95 (1.46–2.61)	116 (5.6)		4.55 (2.86–7.25)	35 (4.1)		1.81 (1.00–3.28)
Spain	1532	237 (15.3)		2.08. (1.59–2.72)	537 (35.0)		1.60 (0.32–1.94)	370 (17.3)		1.57 (1.20–2.07)	86 (5.6)		2.96 (1.85–4.74)	35 (2.2)		1.15 (0.63–2.09)
Mexico	2134	326 (15.3)		1.33 (1.02–1.73)	674 (31.6)		1.19 (0.99–1.43)	370 (17.3)		1.34 (1.04–1.73)	107 (5.0)		1.77 (1.11–2.84)	76 (3.6)		1.33 (0.79–2.26)
Two-parent household[d]																
No	951	137 (14.4)	0.002	(ref)	280 (29.4)	0.002	(ref)	127 (13.4)	<0.05	(ref)	65 (6.8)	<0.001	(ref)	32 (3.4)	0.026	(ref)
Yes	4097	445 (10.9)		0.80 (0.64–1.01)	1009 (24.6)		0.88 (0.74–1.06)	440 (10.7)		0.83 (0.65–1.04)	157 (3.8)		0.65 (0.46–0.91)	88 (2.2)		0.71 (0.45–1.12)
Religiosity Religiousness																
None/low	4228	688 (15.8)	<0.001	(ref)	1432 (33.9)	0.006	(ref)	712 (16.8)	0.003	(ref)	287 (6.8)	<0.001	(ref)	142 (3.4)	<0.001	(ref)
High	2015	246 (12.2)		0.73 (0.59–0.91)	612 (30.4)		0.71 (0.60–0.83)	281 (14.0)		0.78 (0.63–0.97)	49 (2.4)		0.44 (0.29–0.66)	29 (1.4)		0.48 (0.28–0.80)

Abbreviation: ref=reference.

[a]Having ever used tobacco, alcohol, binge drinking, marijuana or other drugs.

[b]*p* value for the bivariate χ^2 test.

[c]Multiple logistic regression odds ratios (and 95% confidence intervals) of each variable, adjusted for all variables in the first column.

[d]Two-parent household: refers to the response that the adolescent gave about whether he/she lived with both parents.

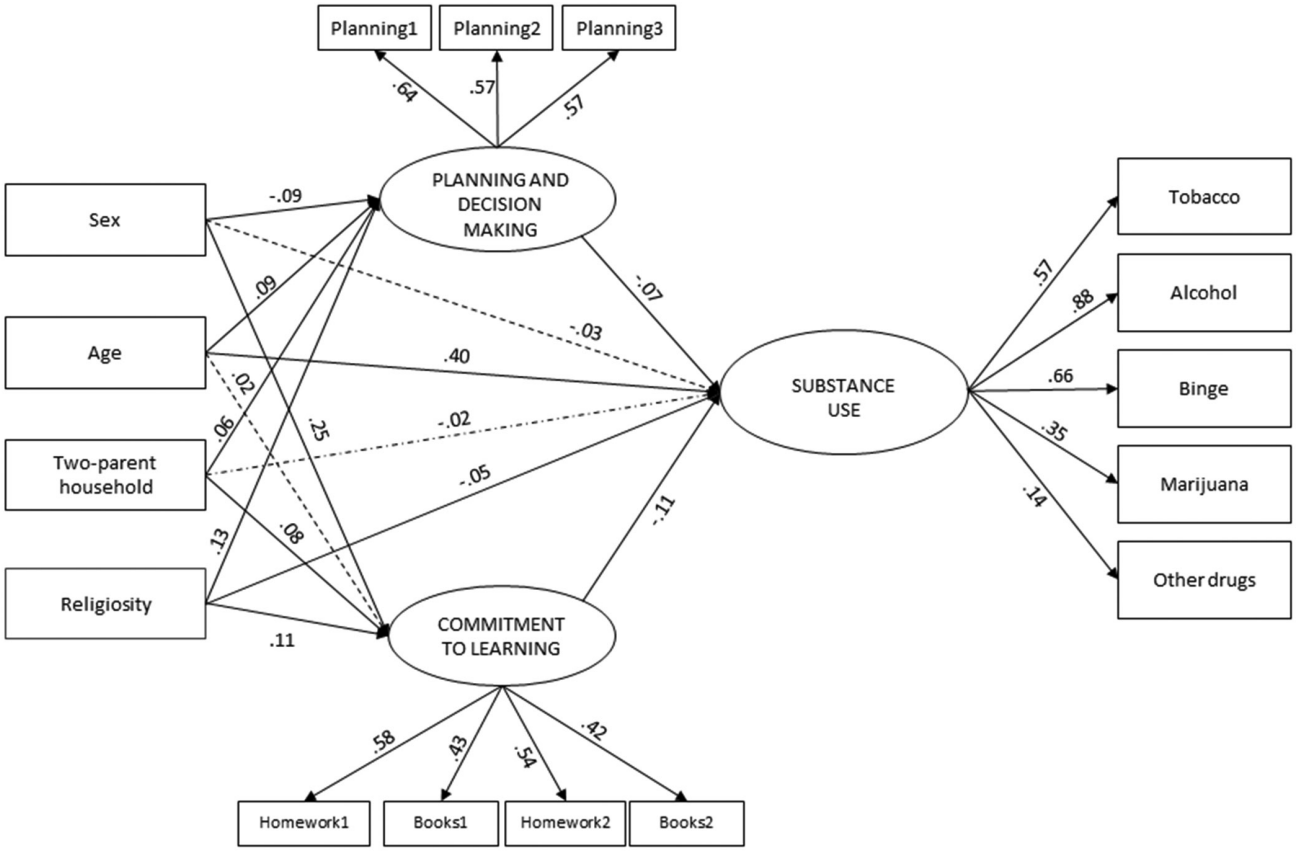

FIGURE 1 Structural equation model

Benson et al., 2011; Bleck & DeBate, 2016; Chatterjee et al., 2018; Cheney et al., 2015; Hoyt et al., 2012; Oman et al., 2004; Paakkari et al., 2019; Scales et al., 2017; Search Institute, 2007, 2014).

4.1.1 | Planning and decision-making

Our results confirm that there is a link between planning and decision-making and substance use. The lack of statistical significance in the association with other drugs can be explained by the lower prevalence of this behaviour in the sample. These results are in line with some previous studies that show that this social competence is a protective factor against substance use (Benson, 2007; Chen et al., 2019; Duncan et al., 2019; Search Institute, 2014; Sloboda et al., 2009; Westling et al., 2012). Specifically, the skills involved in decision-making are a good predictor of a intention to use tobacco (Epstein et al., 2000) and of using tobacco (Benson, 2007; Chen et al., 2019; Westling et al., 2012), alcohol (Benson, 2007; Chen et al., 2019), marijuana (Sloboda et al., 2009) and other drugs (Benson, 2007) in adolescents.

In fact, a socially competent adolescent will be able to recognize and choose the most suitable behaviours in different situations, foreseeing possible outcomes of each (Westling et al., 2012). It is reasonable to assume that adolescents with better planning skills and sense of responsibility will choose to follow the advice of adults and health experts aimed at preventing substance use at these ages due to the risks they entail (Centers for Disease Control & Prevention, 2021). On the contrary, young people with higher degrees of risk-seeking and impulsiveness are at higher risk of substance use (Harrop & Catalano, 2016). The literature shows that impulsiveness and adolescent's lower emotional regulation competence are factors that consistently predict substance use (Martínez-Loredo et al., 2019; Wang et al., 2010).

4.1.2 | Interpersonal competence

Interpersonal competence was not significantly associated with any of the substance use variables. Previous studies have shown that sociability (an aspect of interpersonal competence) predicts lower substance use (Benson et al., 2011; Domitrovich et al., 2017; Search

Institute, 2007). It specifically reduces the desire to smoke (Epstein et al., 2000) and prevents the use of drugs and alcohol (Messer et al., 2021; Oman et al., 2004), more obviously in boys and in early adolescence (Chen et al., 2019).

On the other hand, some studies highlight that more sociable adolescents may have a greater tendency to question the rules imposed by adults and to rebel against them to be looked up to by their peers and attract their attention (Becker & Luthar, 2007), leading to the adoption of unhealthy lifestyles, such as greater use of substances (Chen et al., 2019; Westling et al., 2012). These adolescents may also have more opportunities to engage in problematic behaviours and in unstructured activities unsupervised by adults (Osgood et al., 1996), especially in the case of 'adolescents from disadvantaged backgrounds' (Parra & Oliva, 2015, p. 207).

In this regard, care must be taken not to generalize the effects of sociability too much, since both positive and negative effects have been found. In our case, no connection was found between interpersonal competence and substance use. Future studies should continue investigating whether this asset may be a protective or risk factor for substance use.

4.1.3 | Commitment to learning

The data obtained suggest that commitment to learning in adolescents, specifically in aspects linked to homework completion and reading for pleasure, is associated with lower prevalence of substance use. These results are in line with previous findings that show that commitment to learning reduces substance use among adolescents (Benson, 2007; Mak & Fancourt, 2020b; Messer et al., 2021; Search Institute, 2014; Stone et al., 2012) and also that substance use predicts negatively commitment to learning (Manrique-Millones et al., 2021). The literature recounts various studies that have also examined other aspects of the commitment to learning, linked more to the perception of school (Paakkari et al., 2019) or the commitment to the school (Bleck & DeBate, 2016).

Specifically, our study provides knowledge about the benefits of spending time on homework and reading for pleasure (non-mandatory reading outside of school hours) during adolescence. As previous studies point out (Degenhardt et al., 2016; Mak & Fancourt, 2020b; Stone et al., 2012), substance use among young people could be prevented if they were in the habit of reading. Reading promotes knowledge acquisition, having more information and opening up imaginary worlds. All these factors can encourage young people to adopt healthier lifestyles (Stone et al., 2012). In fact, young people who spend more time reading spend less time doing other activities such as watching television or on social media, activities that are associated with greater substance use (Jackson et al., 2018). Recent studies have shown that reading helps people to regulate emotional states and understand the feelings of others (Mak & Fancourt, 2020a; Shamay-Tsoory & Aharon-Peretz, 2007), thus promoting prosocial behaviours. Studies show that a lack of prosocial behaviours among youth promotes antisocial behaviours and substance use (Mak & Fancourt, 2020a).

On the other hand, homework supervision by the adolescents' parents has been associated previously with less alcohol use, although only in two-parent families (Griffin et al., 2000). Our results also show that the time spent by the adolescent on homework completion and reading is associated with lower substance use. It should be noted that our study did not specifically analyse homework under parental supervision, but it would be interesting in future research to examine whether homework completion is differentially associated with substance use according to whether the homework is completed under parental supervision, to what extent and at which specific ages. In fact, according to Griffin et al. (2000), parental supervision of homework could reflect, at the same time, parental supervision of the adolescent's general behaviour.

4.2 | Other predictors of substance use

Consistent with other studies, our results confirm that being in early adolescence (as compared with middle and late adolescence), being female, and being highly religious are associated with lower risk of substance use (Belintxon et al., 2020; Bugbee et al., 2019; European Monitoring Centre for Drugs and Drug Addiction & European School Survey Project on Alcohol and Other Drugs, 2020; Oman et al., 2004; Patte et al., 2017).

4.3 | Limitations

Variation limitations must be considered when interpreting the results of this study. First, the data were obtained from a cross-sectional study that does not allow causality to be inferred from the associations it found. Such associations may be due to reverse causality (that is, that substance use may affect the assets examined) or the role of other variables not considered in this paper. However, the fact that it adjusts for potentially confounding variables makes this less probable. In any case, longitudinal studies should be conducted to test these results.

Second, the use of a self-administered questionnaire, which requests information about the adolescent's own perception, increases the risk of bias due to social desirability. To minimize this possible bias, participants were reminded that the questionnaire was anonymous and the answers were confidential.

This study also has various strengths. First, the sample size makes it possible to generalize from the results, and allows us to adjust the analyses for numerous potentially confounding variables. Second, the sample is from four countries that are underrepresented in the literature and which have a common culture basis, but which are also different from each other in important respects. Therefore, the fact that the model is valid in the four countries featured in this paper makes generalization in the broader Hispanic culture more feasible.

In summary, this is the first study conducted with Hispanic adolescents using the framework of developmental assets to explore the association between planning and decision-making capacity, interpersonal competence and commitment to learning and a wide variety of substance use.

5 | CONCLUSION

This paper shows that two internal assets (planning and decision-making and commitment to learning) could be key factors in explaining substance use during adolescence. In line with previous studies in other contexts, we found that these two internal assets are associated with lower substance use in a sample of adolescents from Spanish-speaking countries. Moreover, we found that these factors seem to mediate the relationship between the socio-demographic variables and substance use. On the contrary, social competence does not seem to influence substance use. These results may be very useful for researchers, schools and health professionals when designing health programmes for children and adolescents. The internal assets seem to be important aspects to work on in such programmes with children, adolescents and families to avoid risky behaviours such as substance use.

The Developmental Assets framework has been proved as a suitable frame of reference for PNPs to assess and develop child and adolescent positive development. It emphasizes healthy development for adolescents in coherence with a core-nursing concept, health promotion, which can help nurse leaders and educators to develop a workforce prepared to actively address substance use demands across all practice levels and contexts.

ACKNOWLEDGEMENTS

The authors gratefully acknowledge the funding from Plan de Investigacion de la Universidad de Navarra (PIUNA) and the participation of adolescents and schools.

CONFLICT OF INTEREST

No conflict of interest has been declared by the authors.

AUTHOR CONTRIBUTIONS

AO, MC, MV, MB: Made substantial contributions to conception and design, or acquisition of data or analysis and interpretation of data; AO, MC, MV, AB, MB: Involved in drafting the manuscript or revising it critically for important intellectual content; AO, MC, MV, AB, MB: Given final approval of the version to be published. Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content; AO, MC, MV, AB, MB: Agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

PEER REVIEW

The peer review history for this article is available at https://publons.com/publon/10.1111/jan.15100.

DATA AVAILABILITY STATEMENT

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

ORCID

Maider Belintxon https://orcid.org/0000-0002-2214-051X
María Calatrava https://orcid.org/0000-0002-2394-910X
Alfonso Osorio https://orcid.org/0000-0003-4337-5382
Álvaro Balaguer https://orcid.org/0000-0002-8727-4690
Marta Vidaurreta https://orcid.org/0000-0002-6003-3774

REFERENCES

AAP Committee on Practice and Ambulatory Medicine, AAP Bright Futures Periodicity Schedule Workgroup. (2017). 2017 Recommendations for preventive pediatric health care. *Pediatrics*, *139* (4), https://doi.org/10.1542/peds.2017-0254

Aruda, M. M., Griffin, V. J., Schartz, K., & Geist, M. (2016). Evolving role of pediatric nurse practitioners. *Journal of the American Association of Nurse Practitioners*, *28* (2), 68–74. https://doi.org/10.1002/2327-6924.12289

Becker, B. E., & Luthar, S. S. (2007). Peer-perceived admiration and social preference: Contextual correlates of positive peer regard among suburban and urban adolescents. *Journal of Research on Adolescence: The Official Journal of the Society for Research on Adolescence*, *17* (1), 117–144. https://doi.org/10.1111/j.1532-7795.2007.00514.x

Belintxon, M., Osorio, A., de Irala, J., Van Riper, M., Reparaz, C., & Vidaurreta, M. (2020). Connections between family assets and positive youth development: The association between parental monitoring and affection with leisure-time activities and substance use. *International Journal of Environmental Research and Public Health*, *17* (21), 8170. https://doi.org/10.3390/ijerph17218170

Bendaou, B., Zarrouq, B., Kinany, K. E., Lyoussi, B., Benjelloun, M. C., Nejjari, C., & Rhazi, K. E. (2018). Risk factors and prevalence of use of different tobacco products among school adolescents in the North Central region of Morocco: A cross-sectional study. *The Pan African Medical Journal*, *30*, 73. https://doi.org/10.11604/pamj.2018.30.73.10896

Benson, P. L. (1997). *All kids are our kids: What communities must do to raise caring and responsible children and adolescents*. 317pp. Jossey-Bass.

Benson, P. L. (2007). Developmental assets: An overview of theory, research, and practice. In R. K. Silbereisen, & R. M. Lerner (Eds.), *Approaches to positive youth development* (pp. 33–58). SAGE Publications Ltd.

Benson, P. L., Leffert, N., Scales, P. C., & Blyth, D. A. (1998). Beyond the 'village' rhetoric: Creating healthy communities for children and adolescents. *Applied Developmental Science*, *2* (3), 138–159. https://doi.org/10.1207/s1532480xads0203_3

Benson, P. L., Scales, P. C., & Syvertsen, A. K. (2011). The contribution of the developmental assets framework to positive youth development theory and practice. *Advances in Child Development and Behavior*, *41*, 197–230. https://doi.org/10.1016/b978-0-12-386492-5.00008-7

Bleck, J., & DeBate, R. (2016). Long-term association between developmental assets and health behaviors: An exploratory study. *Health Education & Behavior*, *43* (5), 543–551. https://doi.org/10.1177/1090198115606915

Bugbee, B. A., Beck, K. H., Fryer, C. S., & Arria, A. M. (2019). Substance use, academic performance, and academic engagement among high school seniors. *The Journal of School Health*, *89* (2), 145–156. https://doi.org/10.1111/josh.12723

Carlos, S., Osorio, A., Calatrava, M., Lopez-Del Burgo, C., Ruiz-Canela, M., & de Irala, J. (2016). Project YOURLIFE (What young people

think and feel about relationships, love, sexuality, and related risk behavior): Cross-sectional and longitudinal protocol. *Front Public Health*, *4*, 28. https://doi.org/10.3389/fpubh.2016.00028

Centers for Disease Control and Prevention (2021). Alcohol use and your health. Retrieved November 3th, 2020 from https://www.cdc.gov/alcohol/fact-sheets/alcohol-use.htm

Chatterjee, D., McMorris, B., Gower, A. L., Forster, M., Borowsky, I. W., & Eisenberg, M. E. (2018). Adverse childhood experiences and early initiation of marijuana and alcohol use: The potential moderating effects of internal assets. *Substance Use & Misuse*, *53* (10), 1624–1632. https://doi.org/10.1080/10826084.2017.1421224

Chen, L., Chen, X., Zhao, S., French, D. C., Jin, S., & Li, L. (2019). Predicting substance use and deviant behavior from prosociality and sociability in adolescents. *Journal of Youth and Adolescence*, *48* (4), 744–752. https://doi.org/10.1007/s10964-018-0940-4

Cheney, M. K., Oman, R. F., & Vesely, S. K. (2015). Prospective associations among youth assets in young adults and tobacco use. *American Journal of Preventive Medicine*, *48* (1 Suppl 1), S94–S101. https://doi.org/10.1016/j.amepre.2014.09.021

Comisión interamericana para el control del abuso de drogas. (2010). *Informe subregional sobre uso de drogas en población escolarizada 2009/2010*. Retrieved December 4th, 2020 from, https://www.unodc.org/documents/peruandecuador/Informes/Segundo_Subregional.pdf

Connors, E., McKenzie, M., Robinson, P., Tager, M., Scardamalia, K., Oros, M., & Hoover, S. (2019). Adaptation of the drug and drug problems perception questionnaire to assess healthcare provider attitudes toward adolescent substance use. *Preventive Medicine Reports*, *14*, https://doi.org/10.1016/j.pmedr.2019.100852

Daley, A. M., Lestishock, L., & White, P. H. (2020). Pediatric nurse practitioners' perspectives on engaging adolescents to shift from pediatric to adolescen-focused health care services. *Journal of Pediatric Health Care*, *34* (6), 550–559.

Degenhardt, L., Stockings, E., Patton, G., Hall, W. D., & Lynskey, M. (2016). The increasing global health priority of substance use in young people. *Lancet Psychiatry*, *3* (3), 251–264. https://doi.org/10.1016/S2215-0366(15)00508-8

Domitrovich, C. E., Durlak, J. A., Staley, K. C., & Weissberg, R. P. (2017). Social-emotional competence: An essential factor for promoting positive adjustment and reducing risk in school children. *Child Development*, *88* (2), 408–416. https://doi.org/10.1111/cdev.12739

Duncan, R. J., Rolan, E., Marceau, K., Lewis, K. M., Bavarian, N., DuBois, D. L., & Flay, B. (2019). Childhood protective factors and a prevention program reduce later problem behaviors. *Journal of Applied Developmental Psychology*, *65*, https://doi.org/10.1016/j.appdev.2019.101063

El Kazdouh, H., El-Ammari, A., Bouftini, S., El Fakir, S., & El Achhab, Y. (2018). Adolescents, parents and teachers' perceptions of risk and protective factors of substance use in Moroccan adolescents: A qualitative study. *Substance Abuse Treatment, Prevention, and Policy*, *13* (1), 31. https://doi.org/10.1186/s13011-018-0169-y

Epstein, J. A., Griffin, K. W., & Botvin, G. J. (2000). Competence skills help deter smoking among inner city adolescents. *Tobacco Control*, *9* (1), 33–39. https://doi.org/10.1136/tc.9.1.33

European Monitoring Centre for Drugs and Drug Addiction, & European School Survey Project on Alcohol and Other Drugs (2020). *ESPAD report 2019 results from the European school survey project on alcohol and other drugs*. Retrieved December 4th, 2020 from, http://www.espad.org/sites/espad.org/files/2020.3878_EN_04.pdf

Finnell, D. S., Tierney, M., & Mitchell, A. M. (2019). Nursing: Addressing substance use in the 21st century. *Substance Abuse*, *40* (4), 412–420. https://doi.org/10.1080/08897077.2019.1674240

Forster, M., Amy, G. L., Areba, E., & McMorris, B. J. (2019). Cumulative psychosocial risks, internal asse, and past 30-day tobacco use among middle and high school students: The promise of internal assets. *Addictive Behaviors*, *89*, 240–247. https://doi.org/10.1016/j.addbeh.2018.10.014

Griffin, K. W., Botvin, G. J., Scheier, L. M., Diaz, T., & Miller, N. L. (2000). Parenting practices as predictors of substance use, delinquency, and aggression among urban minority youth: Moderating effects of family structure and gender. *Psychology of Addictive Behaviors: Journal of the Society of Psychologists in Addictive Behaviors*, *14* (2), 174–184. https://doi.org/10.1037//0893-164x.14.2.174

Harrop, E., & Catalano, R. F. (2016). Evidence-based prevention for adolescent substance use. *Child and Adolescent Psychiatric of North America*, *25* (3), 387–410. https://doi.org/10.1016/j.chc.2016.03.001

Hongthong, D., & Areesantichai, C. (2014). Factors predictive of alcohol consumption among senior high school students in Phayao province, Thailand. *Journal of Substance Use*, *19* (5), 368–372. https://doi.org/10.3109/14659891.2013.827245

Hoyt, L. T., Chase-Lansdale, P. L., McDade, T. W., & Adam, E. K. (2012). Positive youth, healthy adults: Does positive well-being in adolescence predict better perceived health and fewer risky health behaviors in young adulthood? *The Journal of Adolescent Health: Official Publication of the Society for Adolescent Medicine*, *50* (1), 66–73. https://doi.org/10.1016/j.jadohealth.2011.05.002

International Nurses Society on Addictions, & American Nurses Association. (2013). *Scope and standards of addictions nursing practice*. Silver Spring, MD: Author.

Jackson, K. M., Janssen, T., & Gabrielli, J. (2018). Media/marketing influences on adolescent and young adult substance abuse. *Current Addiction Report*, *5* (2), 146–157. https://doi.org/10.1007/s40429-018-0199-6

Jackson, P. L., Kennedy, C., Sadler, L. S., Kenney, K. M., Lindeke, L. L., Sperhac, A. M., & Hawkins-Walsh, E. (2001). Professional practice of pediatric nurse practitioners: implications for education and training of PNPs. *Journal of Pediatric Health Care*, *15* (6), 291–298. https://doi.org/10.1067/mph.2001.115389

Kemppainen, V., Tossavainen, K., & Turunen, H. (2013). Nurses' roles in health promotion practice: an integrative review. *Health Promotion International*, *28* (4), 490–501. https://doi.org/10.1093/heapro/das034

Laserna Jiménez, C., López Poyato, M., Casado Montañés, I., Guix-Comellas, E. M., & Fabrellas, N. (2021). Paediatric nursing clinical competences in primary healthcare: A systematic review. *Journal of Advanced Nursing*, *77* (6), 2662–2679. https://doi.org/10.1111/jan.14768

Leffert, N., Benson, P. L., Scales, P. C., Sharma, A. R., Drake, D. R., & Blyth, D. A. (1998). Developmental assets: Measurement and prediction of risk behaviors among adolescents. *Applied Developmental Science*, *2*(4), 209–230. https://doi.org/10.1207/s1532480xads0204_4

Luecha, T., Peremans, L., Dilles, T., & Van Rompaey, B. (2019). The prevalence of alcohol consumption during early adolescence: A cross-sectional study in an eastern province, Thailand. *International Journal of Adolescence and Youth*, *24* (2), 160–176. https://doi.org/10.1080/02673843.2018.1482773

Mak, H. W., & Fancourt, D. (2020a). Longitudinal associations between reading for pleasure and child maladjustment: Results from a propensity score matching analysis. *Social Science & Medicine*, *253*, https://doi.org/10.1016/j.socscimed.2020.112971

Mak, H. W., & Fancourt, D. (2020b). Reading for pleasure in childhood and adolescent healthy behaviours: Longitudinal associations using the Millennium Cohort Study. *Preventive Medicine*, *130*, https://doi.org/10.1016/j.ypmed.2019.105889

Manrique-Millones, D., Wiium, N., Pineda-Marín, C., Fernández-Arata, M., Alfonso-Murcia, D., López-Martínez, J. L., & Millones-Rivalles, R. (2021). Association between substance use behaviors, developmental assets and mental health: A glance at Latin American

Young College students. *Frontiers in Psychology*, *12*, https://doi.org/10.3389/fpsyg.2021.639578

Martínez-Loredo, V., Grande-Gosende, A., Fernández-Artamendi, S., Secades-Villa, R., & Fernández-Hermida, J. R. (2019). Substance use and gambling patterns among adolescents: Differences according to gender and impulsivity. *Journal of Gambling Studies*, *35* (1), 63–78. https://doi.org/10.1007/s10899-018-09824-x

Messer, L. C., Halladay, C., Hofert, G., & Sheppard, B. K. (2021). Youth assets and associations with adolescent risk taking. *Journal of School Health*, *91* (1), 37–49. https://doi.org/10.1111/josh.12973

Observatorio Español de las Drogas y las Adicciones. (2021). *Alcohol, tabaco y drogas ilegales en España*. Retrieved December 4th, 2020 from, https://pnsd.sanidad.gob.es/

Oman, R. F., Vesely, S., Aspy, C. B., McLeroy, K. R., Rodine, S., & Marshall, L. (2004). The potential protective effect of youth assets on adolescent alcohol and drug use. *American Journal of Public Health*, *94* (8), 1425–1430. https://doi.org/10.2105/ajph.94.8.1425

Osgood, D. W., Wilson, J. K., O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1996). Routine activities and individual deviant behavior. *American Sociological Review*, *61*, 635–655. https://doi.org/10.2307/2096397

Paakkari, L., Torppa, M., Välimaa, R., Villberg, J., Ojala, K., & Tynjälä, J. (2019). Health asset profiles and health indicators among 13- and 15-year-old adolescents. *International Journal of Public Health*, *64* (9), 1301–1311. https://doi.org/10.1007/s00038-019-01280-7

Parra, Á., & Oliva, A. (2015). Programas extraescolares. Un buen recurso para el fomento de la competencia adolescente. In A. Oliva (Ed.). *Desarrollo Positivo Adolescente* (pp. 207–227). Sintesis.

Patte, K. A., Qian, W., & Leatherdale, S. T. (2017). Binge drinking and academic performance, engagement, aspirations, and expectations: A longitudinal analysis among secondary school students in the COMPASS study. *Health Promotion and Chronic Disease Prevention in Canada: Research, Policy and Practice*, *37* (11), 376–385. https://doi.org/10.24095/hpcdp.37.11.02

Pérez, A., Osman, A., Peña, L., Abad-Vivero, E. N., Hardin, J. W., Sargent, J., Thrasher, J. F., & Mejía, R. (2018). Parent education and substance use among Latin-American early adolescents. *Health Behavior and Policy Review*, *5* (3), 91–99. https://doi.org/10.14485/hbpr.5.3.9

Ruiz-Canela, M., Lopez-del Burgo, C., Carlos, S., Calatrava, M., Beltramo, C., Osorio, A., & de Irala, J. (2013). Observational research with adolescents: A framework for the management of the parental permission. *BMC Medical Ethics*, *14*, 2. https://doi.org/10.1186/1472-6939-14-2

Scales, P. C., & Leffert, N. (2004). *Developmental Assets: A synthesis of the scientific research on adolescent development*, 2nd ed. Search Institute.

Scales, P. C., Leffert, N., & Vraa, R. (2003). The relation of community developmental attentiveness to adolescent health. *American Journal of Health Behavior*, *27* (1), S22–S34. https://doi.org/10.5993/AJHB.27.1.s1.3

Scales, P. C., Roehlkepartain, E. C., & Fraher, K. (2012). Do developmental assets make a difference in majority-world contexts? Retrieved November 2nd, 2020, from https://www.search-institute.org/downloadable/DoAssetsMatter-2012-Report.pdf

Scales, P. C., Roehlkepartain, E. C., & Shramko, M. (2017). Aligning youth development theory, measurement, and practice across cultures and contexts: Lessons from use of the development assets profile. *Child Indicators Research*, *10*, 1145–1178. https://doi.org/10.1007/s12187-016-9395-x

Search Institute. (2007). *40 Developmental assets for adolescents*. Retrieved January 5th, 2021, from https://www.search-institute.org/

Search Institute. (2014). *Developmental assets: A profile of your youth*. Retrieved January 5th, from: https://www.search-institute.org/wp-content/uploads/2017/11/AB-Sample-Report-2012-1.pdf

Shamay-Tsoory, S. G., & Aharon-Peretz, J. (2007). Dissociable prefrontal networks for cognitive and affective theory of mind: A lesion study. *Neuropsychologia*, *45* (13), 3054–3067. https://doi.org/10.1016/j.neuropsychologia.2007.05.021

Shek, D. T., Dou, D., Zhu, X., & Chai, W. (2019). Positive youth development: Current perspectives. *Adolesc Health Medicine and Therapeuthic*, *10*, 131–141. https://doi.org/10.2147/ahmt.S179946

Sloboda, Z., Stephens, R. C., Stephens, P. C., Grey, S. F., Teasdale, B., Hawthorne, R. D., Williams, J., & Marquette, J. F. (2009). The adolescent substance abuse prevention study: A randomized field trial of a universal substance abuse prevention program. *Drug and Alcohol Dependence*, *102* (1–3), 1–10. https://doi.org/10.1016/j.drugalcdep.2009.01.015

Stone, A. L., Becker, L. G., Huber, A. M., & Catalano, R. F. (2012). Review of risk and protective factors of substance use and problem use in emerging adulthood. *Addictive Behaviors*, *37* (7), 747–775. https://doi.org/10.1016/j.addbeh.2012.02.014

Su, J., Supple, A. J., & Kuo, S. I. (2018). The role of individual and contextual factors in differentiating substance use profiles among adolescents. *Substance Use & Misuse*, *53* (5), 734–743. https://doi.org/10.1080/10826084.2017.1363237

Tierney, M., Finnell, D. S., Naegle, M., Mitchell, A. M., & Pace, E. M. (2020). The future of nursing: Accelerating gains made to address the continuum of substance use. *Archives of Psychiatric Nursing*, *34* (5), 297–303. https://doi.org/10.1016/j.apnu.2020.07.010

Wang, R. H., Chen, S. W., Tang, S. M., Lee, S. L., & Jian, S. Y. (2011). The relationship between selected developmental assets and health-promoting behaviours of adolescents in Southern Taiwan. *Journal of Clinical Nursing*, *20* (3–4), 359–368. https://doi.org/10.1111/j.1365-2702.2010.03459.x

Wang, R. H., Hsu, H. Y., Lin, S. Y., Cheng, C. P., & Lee, S. L. (2010). Risk behaviours among early adolescents: Risk and protective factors. *Journal of Advanced Nursing*, *66* (2), 313–323. https://doi.org/10.1111/j.1365-2648.2009.05159.x

Westling, E., Andrews, J. A., & Peterson, M. (2012). Gender differences in pubertal timing, social competence, and cigarette use: A test of the early maturation hypothesis. *The Journal of Adolescent Health*, *51* (2), 150–155. https://doi.org/10.1016/j.jadohealth.2011.11.021

World Health Organization (2018). *Adolescents: Health Risks and Solutions*. Retrieved January 5th, from: https://www.who.int/health-topics/adolescent-health

How to cite this article: Belintxon, M., Calatrava, M., Osorio, A., Balaguer, Á., & Vidaurreta, M. (2022). Internal developmental assets and substance use among Hispanic adolescents. A cross-sectional study. *Journal of Advanced Nursing*, 78, 1990–2003. https://doi.org/10.1111/jan.15100

The *Journal of Advanced Nursing (JAN)* is an international, peer-reviewed, scientific journal. *JAN* contributes to the advancement of evidence-based nursing, midwifery and health care by disseminating high quality research and scholarship of contemporary relevance and with potential to advance knowledge for practice, education, management or policy. *JAN* publishes research reviews, original research reports and methodological and theoretical papers.

For further information, please visit *JAN* on the Wiley Online Library website: www.wileyonlinelibrary.com/journal/jan

Reasons to publish your work in *JAN*:

- **High-impact forum: the world's most cited nursing journal, with an Impact Factor of 2.561 – ranked 6/123 in the 2019 ISI Journal Citation Reports © (Nursing; Social Science).**
- **Most read nursing journal in the world: over 3 million articles downloaded online per year and accessible in over 10,000 libraries worldwide (including over 6,000 in developing countries with free or low cost access).**
- **Fast and easy online submission:** online submission at http://mc.manuscriptcentral.com/jan.
- **Positive publishing experience:** rapid double-blind peer review with constructive feedback.
- **Rapid online publication in five weeks:** average time from final manuscript arriving in production to online publication.
- **Online Open:** the option to pay to make your article freely and openly accessible to non-subscribers upon publication on Wiley Online Library, as well as the option to deposit the article in your own or your funding agency's preferred archive (e.g. PubMed).