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Trajectories of Marijuana Use from Adolescence to Adulthood as Predictors of Unemployment Status in the Early Forties

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Abstract

Objectives—To study the degree to which individuals in different trajectories of marijuana use are similar or different in terms of unemployment status at mean age 43.

Methods—We gathered longitudinal data on a prospective cohort taken from a community sample (N = 548). Forty nine percent of the original participants were females. Over 90% of the participants were white. The participants were followed from adolescence to early midlife. The mean ages of participants at the follow-up interviews were 14.1, 16.3, 22.3, 27.0, 31.9, 36.6, and 43.0, respectively. We used the growth mixture modeling (GMM) approach to identify the trajectories of marijuana use over a 29 year period.

Results—Five trajectories of marijuana use were identified: chronic users/decreasers (8.3%), quitters (18.6%), increasing users (7.3%), chronic occasional users (25.6%), and nonusers/experimenters (40.2%). Compared with nonusers/experimenters, chronic users/decreasers had a significantly higher likelihood of unemployment at mean age 43 (Adjusted Odds Ratio = 3.51, 95% Confidence Interval = 1.13 – 10.91), even after controlling for the covariates.

Conclusions and Scientific Significance—The results of the associations between the distinct trajectories of marijuana use and unemployment in early midlife indicate that it is important to develop intervention programs targeting chronic marijuana use as well as unemployment in individuals at this stage of development. Results from this study should encourage clinicians, teachers, and parents to assess and treat chronic marijuana use in adolescents.

Keywords

Trajectories of Marijuana Use; Unemployment; Longitudinal; Adolescence to the 5th decade of life

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Introduction

According to the 2013 National Survey on Drug Use and Health (NSDUH), marijuana is the most commonly used illegal drug in the U.S.¹ According to the Monitoring the Future Survey,² the prevalence of illicit marijuana use among adolescents remains at unacceptable and harmful levels. In 2015, 11.8%, 25.4%, and 34.9% of the 8th, 10th, and 12th-graders, respectively, used marijuana in the past year and 6.5%, 14.8%, and 21.3% were current users, respectively.² Several studies have examined the consequences of marijuana use by adolescents and young adults.³⁻¹¹ In general, the findings have demonstrated that chronic marijuana use is associated with a number of adverse consequences, including psychiatric disorders,³ poor school achievement,⁵ financial difficulties,⁵ and difficulties at work.⁵

Marijuana use also has adverse consequences on employment. Both cross-sectional studies¹²⁻¹⁴ and longitudinal studies¹⁵ have demonstrated an association between marijuana use and unemployment. For example, based on retrospective data, Compton et al. (2014)¹² found that marijuana use was associated with future job loss. De Simone (2002)¹⁴ indicated that the use of marijuana substantially reduces the likelihood of employment. Using data from a New Zealand birth cohort, Fergusson and Boden (2008)¹⁵ found a significant association between increasing levels of marijuana use at ages 14-21 and higher unemployment at some point between ages 21 and 25.

Early midlife (i.e., early forties), which serves as a nexus between youth and older age, is a period when the cumulative adverse effects of marijuana use become both more manifest and more serious.⁸ Early midlife is also a period when unemployment after job loss starts to last longer and reemployment becomes more difficult, especially for disadvantaged individuals.¹⁶ We thus hypothesize that the adverse effects of marijuana use on participation in the labor market are magnified during the 5th decade of life. We also postulate that abstaining from marijuana use in the 3rd, 4th, and 5th decade of life will buffer early chronic marijuana use as related to unemployment. However, to our knowledge, no study has examined patterns of different trajectories of marijuana use from adolescence to early midlife as they relate to unemployment in early midlife. The present study addresses this issue and fills an important research gap in the literature.

Operating within a life-span developmental perspective, we applied a prospective longitudinal design and followed youngsters in a community sample from early adolescence into early midlife. In the present research, we used the growth mixture modeling (GMM) approach that differentiates the chronicity and severity of patterns of marijuana use spanning several important developmental stages.^{4,17,18} This group-based approach is suited to analyzing questions about the developmental trajectories that are inherently categorical, such as marijuana use. Differentiation among patterns of development of marijuana use can then be used to predict the likelihood of unemployment in later years. Thus, this approach, which covers several significant developmental periods, has an advantage over an analysis that examines how marijuana use at only one or two points in time during early developmental periods predicts later unemployment.

Our previous trajectory analyses¹⁷ based on an earlier wave of the study identified five groups of marijuana users from mean age 14 to mean age 37. One trajectory group is characterized by chronic marijuana use, and another consists of nonusers/experimenters. There are also three intermediate groups: occasional users, quitters/decreasers, and increasers. In the present study, we extended our prior research¹⁷ by identifying the trajectories of marijuana use over a 29 year period from mean age 14 to mean age 43. Therefore, the long-term patterns of marijuana use assessed in our prior research were extended to a new developmental period, i.e., early midlife. We also examined, from a lifespan perspective, whether there is a trend of maturing out of marijuana use from late 30s to early 40s. In addition to the trajectories of marijuana use, a number of demographic/family¹⁹⁻²³ and behavioral/health factors²⁴⁻²⁷ predict later unemployment status. Therefore, we statistically controlled for these factors in our analyses.

In sum, our research contributes to the literature by following an adolescent sample into adulthood over several developmental periods from mean age 14 to mean age 43. We hypothesize that there are still five groups of marijuana users. Based on the findings in the literature,¹²⁻¹⁶ we also hypothesize that, as compared to the nonusers/experimenters, trajectory groups at the higher levels of marijuana use (e.g., the chronic users) will be associated with an increased likelihood of unemployment despite control on a number of important factors (e.g., demographic/family factors).

Methods

Participants and Procedure

Data on the participants in this study came from a community-based random sample residing in one of two upstate New York counties (Albany and Saratoga) first assessed for drug use in 1983. The sample was taken from an earlier study using maternal interviews in 1975 (T1). The participants' mothers were interviewed about the participants in 1975 (T1) to assess problem behavior among youngsters. At T1, population data from the census (updated in 1975) for sampling units in Albany and Saratoga counties were obtained. A systematic sample of primary sampling units (blocks) in each county was then drawn with probability proportional to the number of households. At the time the data was collected, the sampled families were generally representative of the population of families in the two upstate New York counties. There was a close match of the participants on family income, maternal education, and family structure with the 1980 census. Mothers with one or more child(ren) in the age range of 1-10 were recruited; when there were multiple children in the family, one child in that age range was randomly selected. With regard to ethnicity, the sample was 90% White, 8% African American, and 2% other ethnic/racial minorities. Forty nine percent of the children were females. The detailed sampling procedures were published elsewhere.²⁸ Interviews of the participants were conducted in 1983 (T2, N=756), 1985-1986 (T3, N=739), 1992 (T4, N=750), 1997 (T5, N=749), 2002 (T6, N=673), 2007 (T7, N=607), and 2012-2013 (T8, N=548). The mean ages (SDs) of participants at the follow-up interviews were 14.1 (2.8) at T2, 16.3 (2.8) at T3, 22.3 (2.8) at T4, 27.0 (2.8) at T5, 31.9 (2.8) at T6, 36.6 (2.8) at T7, and 43.0 (2.8) at T8, respectively.

At T2-T7, extensively trained and supervised lay interviewers administered interviews in private. The T8 data collection involved an Internet-based self-administered questionnaire. Written informed consent was obtained from participants and their mothers in 1983, 1985-1986, and 1992, and from participants only in 1997, 2002, 2005-2006, and 2012-2013. The Institutional Review Board of the New York University School of Medicine authorized the use of human subjects in this research study. Earlier waves of the study were approved by the Institutional Review Boards of the Mount Sinai School of Medicine and New York Medical College. Additional information regarding the study methodology is available in prior publications.^{28,29}

Measures

T2-T8 Marijuana Use—At each time wave (T2-T8), questions about marijuana use (adapted from the Monitoring the Future study³⁰) were included. In order to measure the lifetime quantity and frequency of marijuana use from childhood to the mid-thirties, at each time wave questions were asked about the frequency of marijuana use during the period from the last time wave through the current time wave. The reliability and predictive validity of this measure of marijuana use has been demonstrated in the literature. It has been found to predict adult antisocial behavior³¹ and psychiatric disorders.³² Specifically, the questions used were the frequency and quantity of marijuana use in childhood and early adolescence for T2 (prior to and at T2), during the past two years in adolescence for T3 (T2 - T3), during the past five years in the early twenties for T4 (T3 - T4), during the past five years in the late twenties for T5 (T4 - T5), during the past five years in the late twenties and early thirties for T6 (T5 - T6), during the past five years in the mid-thirties for T7 (T6 - T7), and during the past five years in the early-forties for T8 (T7 - T8) (e.g., At T8, the original question was, “During the past five years, how often did you use marijuana or hashish?”). The marijuana use measure at each point in time had a scale coded as none (0), a few times a year or less (1), once a month (2), several times a month (3), once a week (4), several times a week (5), and daily (6).

T8 Unemployment Status—At T8, the participants responded to a question about the number of weeks in the past 12 months during which they were unemployed and looking for work (The options were as follows: 0 = none or never worked for pay [86%], 1 = 1–2 weeks [0.92%], 2 = 3–4 weeks [1.84%], 3 = 5–9 weeks [2.21%], 4 = 10–14 weeks [1.66%], 5 = 15–20 weeks [1.10%], 6 = 21–26 weeks [1.47%], 7 = 27–36 weeks [0.37%], and 8 = 37 or more weeks [4.42%]). Participants who answered “5–9 weeks (3)” or longer were characterized as having an unemployment experience and assigned a score of 1.

Control variables—In this study, we statistically controlled for a number of adolescent and adult factors which were found to predict unemployment status: namely, demographic/family factors (gender,¹⁹ age,²⁰ occupation,²¹ education,²¹ marital status²², family income of origin, and parental educational level²³), behavioral/health factors (cigarette smoking,²⁴ depressive mood,²⁵ physical health problems²⁶), and a prior history of unemployment.²⁷ Specifically, in the present study, the following variables were included as control variables: gender (Male = 1; Female = 0), T8 age, T8 marital status (Married = 1), T8 being a professional (e.g., accountant, doctor, architect, and so on), T8 low educational level (i.e.,

high school diploma, or less), T8 depressive mood (five items; $\alpha = 0.80$; e.g., “Over the last few years, how much were you bothered by feeling low in energy or slowed down?”³³), T8 physical health problems (e.g., diabetes, chronic bronchitis, heart diseases), T8 cigarette smoking (“How often did you smoke cigarettes during the past year?”³⁰), T5, T6, and T7 unemployment experience (unemployed for 5 weeks or longer), T2 family income in the past year before taxes, and T2 highest parental educational level (grade or years of schooling completed).

Analysis

Using the Mplus software,³⁴ we conducted GMM analyses to identify the developmental trajectories of marijuana use. This semi-parametric, group-based statistical approach has been used to analyze developmental trajectories of problem behaviors, including marijuana use.^{4,17,18,35,36,37} This group-based approach enables one, in a probabilistic fashion, to follow particular individuals who belong to relatively homogeneous groups over several developmental periods. In contrast, in a variable-centered approach, the focus is on examining statistically different sets of individuals that may contribute to an association between relevant variables at different stages of development. We treated the dependent variable (marijuana use at each time point) as a censored normal variable. There were 806 participants who participated in the longitudinal study at least twice from 1983 (T2) onwards. Among them, 51%, 71%, 85%, 93%, 97% and 100% participated in the study at least seven, six, five, four, three, and two points in time. We used all of these 806 participants in our GMM analyses and applied the full information maximum likelihood (FIML) approach for missing data. We used the minimum Bayesian Information Criterion (BIC) to determine the number of trajectory groups. We set each of the trajectory polynomials to be cubic, because the preliminary analyses showed a better fit to the data as compared to a linear or quadric model. We did not consider groups with fewer than 3% of the sample because some investigators have cautioned against over-extraction of latent classes due to the presence of non-normal data.³⁸

We calculated solutions for the three-group trajectory (Likelihood Value = -5476; BIC = 11092), the four-group trajectory (Likelihood Value = -5424; BIC = 11022), the five-group trajectory (Likelihood Value = -5371; BIC = 10950), and the six-group trajectory (Likelihood Value = -5330; BIC = 10902). Even though the BIC value for the six-group trajectory was lower than that for the five-group trajectory, we did not consider the six-group solution, because there was one trajectory group with fewer than 3% of the sample. After extracting latent classes, we assigned each participant to the trajectory group with the largest Bayesian posterior probability (BPP). The average classification probabilities for group membership ranged from 0.84 to 0.90, which indicate a satisfactory classification. For each of the trajectory groups, we created an indicator variable, which had a value of 1 if the participant had the largest BPP for that group and 0 otherwise. The observed trajectory for a group was the average of marijuana use at each time point for participants assigned to the group (see Figure 1).

With the T8 sample (N=548), we then conducted logistic regression analyses to examine the association between marijuana use trajectories and T8 unemployment status. Because

specifying which trajectory group an individual belongs to is subject to error, we used the BPPs of belonging to each trajectory group as the independent variables. Because one group was chosen as the reference, the number of independent trajectory variables was 4. First, bivariate logistic regression analyses of the trajectories of marijuana use and unemployment status at T8 were conducted. Second, multivariate logistic regression analyses were conducted, using the control variables cited above. For each independent variable and control variable, we conducted the Wald Chi-square test to test the significance of the association with the likelihood of unemployment status. We also examined the main effects of these control variables and the interactive effects between the controls and marijuana use trajectories on T8 unemployment status.

Results

There were no statistically significant differences between participants included in the analyses of unemployment status at T8 (N=548) and those who did not participate (N=258) with respect to age ($t = 0.17$, p -value = 0.86) and T2 family income ($t = -1.91$, p -value = 0.06). However, there was a greater percentage of female participants (54.7% vs. 36.8%; $\chi^2(1) = 22.55$, p -value < 0.001) and a higher parental educational level (13.65 vs. 13.07; $t = -3.07$, p -value = 0.002) among participants who were included in the T8 analyses, as compared to those who were excluded.

Trajectories of Marijuana Use

Table 1 presents the mean (SD) of the marijuana use scores and the proportions of marijuana users at each time point. The proportion of marijuana users peaked at T4 (mean age = 22) and then decreased through T8 (mean age =43).

Figure 1 presents the five observed marijuana use trajectories. The trajectory groups were named: chronic users/decreasers (N=67, 8.3%), quitters (N=150, 18.6%), increasing users (N=59, 7.3%), chronic occasional users (N=206, 25.6%), and nonusers/experimenters (N=324, 40.2%). As noted in Figure 1, the chronic users/decreasers used marijuana in early adolescence (T2), achieved the maximum level of use on a weekly basis in late adolescence (T3), and then tapered off gradually. Quitters used marijuana in early adolescence (T2), tapered off from late adolescence/emerging adulthood into adulthood, and quit completely at mean age 37 (T7). Increasing users did not use marijuana until late adolescence (T3), increased use from late adolescence/emerging adulthood to the early thirties (several times a week or daily), and then stayed at that level through the early forties. Chronic occasional users did not use marijuana until late adolescence (T3) and used marijuana less than on a monthly basis, but stayed at that level through the early forties. All off the marijuana users showed stable marijuana use from mean age 37 (T7) to mean age 43 (T8)

Trajectories of Marijuana Use as Predictors of T8 Unemployment Status—

There were 61 (11.1%) participants who had been unemployed in the past 12 months for at least 5 weeks prior to T8. The proportion of T8 unemployment among the chronic users/decreasers, the chronic occasional users, the increasing users, the quitters, and the non/experimental users were 19.2%, 15.8%, 13.8%, 7.8%, and 7.6%, respectively.

Table 2 presents the results of the binary logistic regression analysis. Compared with non/experimental users, chronic users/decreasers and chronic occasional users had a significantly higher likelihood of T8 unemployment [Odds Ratio (O.R.) = 3.49, $p < 0.05$; O.R. = 2.66, $p < 0.05$, respectively].

Table 3 presents the results of the multivariate logistic regression analyses, controlling for the covariates (i.e., gender, T8 age, T8 marital status, T8 being a professional, T8 low educational level, T8 depressive mood, T8 physical health problems, T8 cigarette smoking, T5–T7 unemployment experience, T2 family income, and T2 parental educational level). The Hosmer and Lemeshow goodness of fit test statistic [$\chi^2(8) = 4.98$, $p < 0.76$] indicated a good fit to the data.³⁹ Compared with non/experimental users, chronic users/decreasers had a significantly higher likelihood of T8 unemployment [Adjusted Odds Ratio (A.O.R.) = 3.51, $p < 0.05$], even after controlling for the covariates. We also conducted three Wald Chi-square tests to compare the chronic occasional users (A.O.R. = 1.92, $p > 0.05$), the increasing users (A.O.R. = 1.31, $p > 0.05$), and the quitters (A.O.R. = 1.16, $p > 0.05$) with non/experimental users in terms of the likelihood of unemployment status. Individuals belonging to these groups all had a higher likelihood of T8 unemployment, but the findings were not statistically significant. Among the control variables, being a professional was significantly associated with a lower likelihood of unemployment (A.O.R. = 0.43, $p < 0.05$), and T8 depressive mood was significantly associated with a higher likelihood of unemployment (A.O.R. = 1.15, $p < 0.001$). The associations between the other control variables (i.e., gender, T8 age, T8 marital status, T8 low educational level, T8 physical health problems, T8 cigarette smoking, T5–T7 unemployment experience, T2 family income, and T2 parental educational level) and T8 unemployment status were not statistically significant ($p > 0.05$). In addition, none of the interactive effects between marijuana use trajectories and the controls on T8 unemployment status were statistically significant ($p > 0.05$).

Discussion

This study extends our prior research¹⁷ by identifying five trajectory groups of marijuana users (i.e., chronic users/decreasers, increasing users, chronic occasional users, quitters, and nonusers/experimenters) and their association with the participants' unemployment status in 2012–2013, when the participants were in early midlife (mean age = 43 years). The prevalence of marijuana use among individual in early midlife was still high. At the group level, there was high stability of marijuana use from late 30s to early 40s. As regards the association between the trajectory groups of marijuana users and unemployment status, the findings provide partial support for our hypotheses. Our results suggest that, compared with nonusers/experimenters, chronic users/decreasers had an increased likelihood of unemployment in early midlife. Of importance is the fact that this association was maintained despite control on other important factors, which may be related to both marijuana use and unemployment, such as gender, age, marital status, being a professional, low educational level, depressive mood, physical health problems, and cigarette smoking in early midlife, history of unemployment experience from their late 20s to late 30s, and family income and parental educational level in early adolescence.

Of particular interest are the chronic occasional users. Even though this group's cumulative lifetime use of marijuana was relatively low, compared to the nonusers/experimenters the chronic occasional marijuana users also had significantly greater likelihood of unemployment without controlling for other covariates. However, this association is no longer significant after the addition of the control variables. It is possible that the trajectory of chronic occasional use is related to a configuration of the control variables (e.g., earlier unemployment experience), which in turn is associated with later unemployment.

The findings from both the bivariate analyses and the multivariate analyses showed no significantly different likelihood of unemployment between the increasers and the nonusers/experimenters (with or without controls on other factors). The quitters also did not differ from the nonusers/experimenters in the likelihood of unemployment. These findings suggest that there might be some long-term and cumulative effects from marijuana use on unemployment, especially beginning in adolescence. For the increasers, it is also possible that the cumulative effect from marijuana use had not become evident with respect to unemployment by early midlife.

The relation between chronic marijuana use since early adolescence and later unemployment may be due to the chronic marijuana users' reduced working productivity, which may manifest as a lack of motivation to work, diminished cognitive function, and mental and physical health problems. First, it has been proposed that chronic marijuana use may reduce motivation, as chronic heavy use has been reported as impairing motivation and social performance.⁴⁰ Khantzian and Albanese (2008)⁴¹ also reported that more frequent marijuana use may be associated with the user's lack of motivation to follow through on occupational goals. Hygen (2012)⁴² found a significant association with continued use of cannabis across the life-course and a lowering of work commitment. Second, it is conceivable that the mechanism intervening between chronic marijuana use and unemployment involves diminished cognitive functioning.⁴³ There is evidence that chronic use of marijuana may lead to changes in the structure and function of the brain that interfere with the abilities needed for achievements at work.^{9,11} Brain imaging studies have shown that, as compared to nonusers, regular marijuana users had impaired neural connectivity in specific brain regions, which are involved in executive functions, such as memory and learning.⁴⁴ Third, the lack of success in the labor market among chronic marijuana users may be the result of marijuana-related mental and physical health problems⁸⁻¹¹ or other maladaptive behaviors (e.g., criminality). Finally, it may be that marijuana users are discriminated against in the labor market due to increased medical costs, absenteeism, and poor work performance.

As expected, several control variables were significantly associated with unemployment. In accord with Virtanen et al. (2013)²⁴ we found that earlier unemployment in 2007 is associated with later unemployment without controlling for other variables. One possible explanation is that people who are out of work may suffer from the adverse effects of a deteriorating labor market both during the initial period of unemployment and in the long run.²⁷ Consistent with Hoynes, et al. (2012),²¹ we found that those who had a professional level of occupation were less likely to be unemployed as compared to their counterparts, which suggests that unemployment is not uniform across SES groups. We also found a significant association between current depressive mood and unemployment. Clearly, earlier

unemployment may be related to depressive mood which, in turn, is related to unemployment.

One limitation of the research is its lack of representation of ethnic minorities. We can only generalize our findings to a population of primarily white adolescents and adults. It is well-known that ethnicity is related to unemployment.²¹ Non-White populations are likely to have different experiences of unemployment. Future research with diverse samples may enhance the generalizability of the findings. Second, caution must be exercised in the interpretation of the results. Due to a relatively small sample size and relatively large time span between waves, we may have missed trajectory patterns (or periods) of marijuana use shorter than the time intervals between waves of data collection. Related to this, the finding that the likelihood of unemployment between the increasers and the nonusers/experimenters was not significantly different may be also due to the relatively small sample size. Future research should include a larger sample observed with shorter intervals between waves of data collection. Third, although we included a number of confounding factors in the analyses, we were not able to include other factors which may explain the association of the trajectories of marijuana use with adverse effects on adult functioning; for example, we did not include life events or genetic effects. Fourth, the present study does not enable us to provide inferences regarding causality. Future research should focus on assessing the causal ordering of the trajectories of marijuana use and adult unemployment. Fifth, the study might have benefited from more information on the different ways marijuana is consumed: edibles, vaping, oils, or synthetics, such as K2 and spice.

Despite these limitations, this study has several strengths. We employed longitudinal data to assess the developmental trajectories of marijuana use beginning in early adolescence and extending to the fifth decade of life. This approach enables one to assess changes in marijuana use over important developmental periods as related to adult unemployment status. The results show different consequences of trajectories of marijuana use on unemployment and highlight the significance of identifying specific patterns of marijuana use beginning at an early age and extending into adulthood. Results in this study should encourage clinicians, teachers, and parents to assess, and if necessary, promote treatment of the chronic marijuana use in adolescents. This may translate to a decrease in chronic marijuana use and ultimately a decrease in related unemployment.

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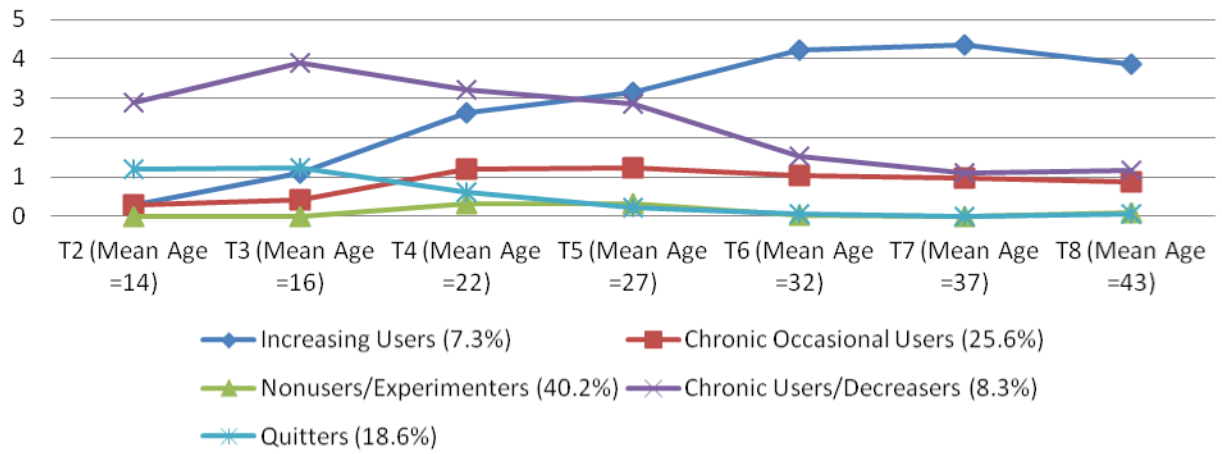


Figure 1. Developmental Trajectories of Marijuana Use Extending From Adolescence to Mean Age 43

Note: The marijuana use measure at each point in time had a scale coded as none (0), a few times a year or less (1), once a month (2), several times a month (3), once a week (4), several times a week (5), and daily (6).

Table 1
Mean (Standard Deviation) of Marijuana Use and Proportions of Marijuana Users at Each Time Point from Adolescence to Mean Age 43 (N=548)

Time Points	Mean of Marijuana Use	Standard Deviation of Marijuana Use	Proportions of Marijuana Users
T2 (Mean age =14)	0.56	1.19	28.5%
T3 (Mean age =16)	0.75	1.35	33.5%
T4 (Mean age =21)	1.00	1.37	54.4%
T5 (Mean age =27)	0.94	1.43	46.7%
T6 (Mean age =32)	0.72	1.37	34.8%
T7 (Mean age =37)	0.61	1.23	31%
T8 (Mean age =43)	0.58	1.26	28.5%

Note: The marijuana use measure at each point in time had a scale coded as none (0), a few times a year or less (1), once a month (2), several times a month (3), once a week (4), several times a week (5), and daily (6).

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Table 2
Logistic Regressions: Trajectories of Marijuana Use from Adolescence to Mean Age 43 as Related to Unemployment Status Among Men and Women in the Early Forties (N=548)

Independent Variables	Unemployment O.R. (95% C.I.) (11.1%) ^a
BPP of Chronic Users/Decreasers	3.49 (1.34 - 9.05) *
BPP of Chronic Occasional Users	2.66 (1.23 - 5.75) *
BPP of Increases	2.02 (0.56 - 7.21)
BPP of Quitters	0.99 (0.35 - 2.82)

Note:

1. O.R.= Odds Ratio; C.I.=Confidence Interval; BPP = Bayesian posterior probability

*
p<0.05;

^a percentage of the sample that the dependent variable = 1;

BPP of belonging to a non-user group serves as the reference;

Unemployment was defined as unemployed for 5-9 weeks or longer in the past 12 months.

Table 3
Logistic Regressions: Trajectories of Marijuana Use from Adolescence to Mean Age 43 as Related to Unemployment Status Among Men and Women in the Early Forties (N=548)

Independent Variables	Unemployment A.O.R. (95% C.I.) (11.1%) ^a
BPP of Chronic Users/Decreasers	3.51 (1.13 -10.91) *
BPP of Chronic Occasional Users	1.92 (0.80 – 4.58)
BPP of Increases	1.31 (0.31 – 5.55)
BPP of Quitters	1.16 (0.36 – 3.71)

Note:

A.O.R.= Adjusted Odds Ratio; C.I.=Confidence Interval; BPP = Bayesian posterior probability

§<0.10;

*
p<0.05;

^a percentage of the sample that the dependent variable = 1;

The following variables were included as control variables in the regression analysis: gender, T8 age, T8 marital status, T8 being a professional, T8 low educational level, T8 depressive mood, T8 physical health problems, T8 cigarette smoking, T5–T7 unemployment experience, T2 family income, and T2 parental educational level;

BPP of belonging to a non-user group serves as the reference;

Unemployment was defined as unemployed for 5-9 weeks or longer in the past 12 months.