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Examination of the link between primary drug of choice and ethnic origin in male military veterans

Karen Louise Hanna

EXAMINATION OF THE LINK BETWEEN PRIMARY DRUG OF CHOICE AND ETHNIC ORIGIN IN MALE MILITARY VETERANS

A Project

Presented to the

Faculty of

California State University,

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In Partial Fulfillment

of the Requirements for the Degree

Master of Social Work

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ABSTRACT

Research in the area of substance abuse is lacking in terms of exploration of ethnic background and corresponding drug used. This study examined the relationship between ethnic origin and primary drug of choice in men in a drug treatment setting. The data consisted of information obtained from ninety-eight files of men from African-American, Latino and Caucasian ethnic backgrounds and their corresponding drug of choice. It was hypothesized that African-American men predominantly used cocaine of some form, Latino men primarily used heroin and Caucasian men predominantly used amphetamine of some form. In addition, it was believed that a relationship between subject's age of drug use onset and their level of completed education would be found. Results indicated limited support for the first hypothesis and statistically significant support for the second hypothesis. The ramifications of the study with regard to prior research and suggestions for future study were also examined.

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Introduction

The high incidence of drug abuse is a problem that reaches every facet of society, from the single individual to a national level realm (Hser, 1993). This is an issue that transcends race, cultural background and socioeconomic status and, because men occupy roles as both heads of companies and heads of households, the use and abuse of illicit substances has far reaching effects. While substance abuse rates are seen highest in the Caucasian population, Latino and African-Americans use greater amounts of heroin and cocaine, respectively, over their lifetimes (Taylor, et. al., 1994).

Problem Definition

This study examined the relationship between predominant drug of choice and ethnic origin in men receiving treatment for chemical dependence in San Bernardino County. In addition to this, the relationship, if any, between subject's age at drug use onset and their corresponding level of completed education was also a question of interest. The purpose of the study was to illuminate the aforementioned link in ethno-specific breakdowns and, as a result, ultimately assist social workers and others in the social services in terms of fiscal, educational and community planning. It is believed that a relationship between drug of choice and ethnic origin exists, namely that African-American men predominantly use

cocaine in some form, Latino men primarily use heroin and Caucasian men predominantly use amphetamines in some form. In addition, it is believed that a demonstrated relationship will exist between the subject's age at drug use onset and their level of completed education.

Problem Focus

Implications in Social Work Arenas: In the midst of the economic and fiscal difficulties being faced by agencies and community groups today, it would be beneficial to know if a certain cultural preference for drugs exists. This knowledge could help to maximize funding, programming and educational dollars. It has been found that anti-drug programs are more effective if tailored to respective motivations of the target community (Buchanan, 1993). One difficulty that may emerge from findings which support ethnic/cultural preference is the danger of generalizing characteristics to a population, thereby reducing the individuality of the clients themselves.

In the area of substance abuse, it would be financially beneficial if it was determined that an ethnic background category indicated a predisposition toward use of a specific drug category, as this would ease the job of the social worker as Administrator. The social worker as Administrator could then direct educational efforts, organize staffing specializations to meet the culturally specific needs of the community served and fiscally divide the resources of the

program in the most cost effective manner possible.

In addition to this, if there is found to be a link between drug of choice and ethnic origin, community planning and prevention groups can redefine the structure of their anti-drug programming. The education can then shift some focus on the reduction of use of a specific drug type, depending on the prevailing culture of the community. The social worker as community intervention specialist would oversee and coordinate the educational process in this situation.

Finally, in terms of social work policy and programming, the estimation of ethno-specific drug prevalence "...ought to be a fundamental element of decision making...for conscientious policymakers dealing with drug problems" (Reuter, 1993). In order to fully face the societal and cultural destruction that substance abuse is wreaking, one must have some idea of the magnitude of the problem; this is necessary before any 'battle,' so to speak, can be planned.

Literature Review

There is little prior research on a link between drug of choice and ethnic origin. Previous studies have examined race and drug of choice as but two of many factors that influence everything from the commission of criminal activity (Hser, 1993) to knowledge surrounding Human Immunodeficiency Virus (Forney, et. al., 1992) to pregnancy

rates and the transmission of drugs as child abuse (Haskett, et. al., 1992; Roberts, 1990; Wilson, 1991). Because of the paucity of prior research, it has been necessary to delve deeper into existing studies to look for any sort of relationship between ethnic origin and primary drug of choice. For instance, an examination of levels of congenital syphilis treatment indicated a correlation between African-American ethnicity and cocaine usage, although this was not a primary research question, originally (Webber, et. al., 1993).

Another issue of relevance to this study was that which links the individual with the culture of their ethnic origin. Past research has shown that if substance abusers fail to examine the ties between their drug use and their social contacts and surroundings, the chance of relapse upon returning to their home community is increased (Finn, 1994). In addition, the relationships that could provide support run the risk of being the ones that encourage potentially dangerous behavior, if one's cohorts are substance abusers themselves (Taylor, et al., 1994). The concept of addiction tends to affix itself within individuals "lacking a sense of self, in the absence of which the addiction becomes the core of their identity" (Peele, 1985). Usage of a standard, culturally prevalent drug could then be seen as a means of 'belonging' to one's neighborhood or even family, for that matter.

The incidence and growth rate of certain drug/ethnicity matchings have been shown at the community and regional levels in some cases. Trends of amphetamine (including methamphetamine) abuse by Caucasians rose an estimated 140 percent between the years of 1983 and 1988 in San Diego, Los Angeles and San Francisco Counties (Heishober and Miller, 1991) with the West Coast region of the United States weighing heavily in the picture of national amphetamine abuse. Further, a National Institute on Drug Abuse study typified the amphetamine abuser as white, low to middle socioeconomic class, in the 20 to 35 year old age range and with an average education level equivalent to a high school diploma (National Institute on Drug Abuse, 1989).

In addition to this, in statistics taken from the California Drug Abuse Data System (CAL-DADS), it was found that the predominance of Caucasian criminal offenders indicated amphetamine as their primary drug of choice if they were found to be substance abusers (Hser, 1993); the rates of Caucasian amphetamine abuse more than quadrupled the rates of use by African-American and Latinos. It is not only the criminally minded that prefer amphetamines, however; in a study of U. S. military men (seventy-two percent of which were Caucasian), it was found that amphetamines had the second highest rate of use (second only to marijuana, and this was due to the large number of responses indicating incidental or experimental use) and

amphetamines were the most prevalent substance to be used on more than an experimental basis (Hawkins, et. al., 1985). Lastly, Laties and Seiss (1981) found that a study of Caucasian adolescents purported the belief that amphetamines were "safer than cocaine," hence the indication of primary choice of the drug.

The bulk of recent literature relating drug of choice and specific ethnic origin focuses primarily on the linkage of African-Americans and cocaine use. One reason for this may be the inordinately high jump in cocaine and 'crack' usage in the last decade (Forney, et. al., 1992; Homer, 1993; Webber, et. al., 1993; Wilson, 1991). According to Webber, et. al. (1993), the rate for cocaine dependence discharge diagnoses for African-Americans in New York City Hospital increased 21-fold between the years of 1982 and 1988, from approximately 47 in 1982 to 997 in 1988. In addition to this, research has found that, between 1987 and 1990, crack cocaine usage accounted for nearly 50% of self reported, past month usage in a study of high school seniors (Homer, 1993).

As reported earlier, taking statistics from the CAL-DADS and Criminal Justice System data, it was shown that cocaine was the prevailing drug of choice with African-American offenders (Hser, 1993). Of the African-American violent crime perpetrators that indicated drug use, approximately sixty-one percent preferred cocaine, while

over 78% of African-Americans that engaged in income generating crime reported cocaine as their drug of choice. Even higher was the use percentage of those African-Americans arrested for crimes relating to drug violations, with their cocaine use rate falling at about eighty-nine percent (Hser, 1993).

A recent study of demographics and profiles of crack users and non-crack users indicated a use rate of approximately seventy percent male. In addition to this, it was found that the categories of regular crack user (having used crack between 100 and 999 times in lifetime) and heavy crack user (having used crack more than 1,000 times in lifetime) were comprised of a 72% African-American male ethnicity rate (Johnson, et. al., 1994). Another study of late that examined the treatment needs for crack cocaine dependent male military veterans found a sixty-seven percent African-American subject rate, which the authors denote as representative of the treatment population and corresponds with other research findings (Piotrowski, et. al., 1994).

Similar to these findings, a recent study of treatment efficacy and the examination of outcome predictors took data from twenty-two treatment centers in and around the Philadelphia area. The demographics showed that close to 80% of its cocaine abuser population was African-American, male and had approximately 12 years of education completed (McLellan, et. al., 1994).

In terms of heroin abuse, the Latino community has a long and diverse relationship with the drug (Bullington, 1977). In many cases, the Latino youth is introduced to heroin from one of his family members, namely an older brother or cousin. Glick and his colleagues (1990) found that two-fifths of a sample representation had first tried the drug with a family member. In younger generations, however, Glick found that it was the neighborhood friend or peer that was the initial supplier of heroin; for those under the age of fifteen, 90% of the sample had had the drug provided by a friend, not a family member.

The gang membership situation has been linked with heroin use in the Latino neighborhoods. In a project studying two Los Angeles 'barrio' gangs, it was estimated that close to 60% of the population had tried heroin at least once, while the National Institute on Drug Abuse has determined that only two percent of the general population has ever experimented with the drug at all, much less established a regular usage pattern (Glick, et. al., 1990).

One of the hindrances in studying this group of substance users is the fact that they are often difficult to find and it is even more difficult to gain their trust (Bullington, 1977). The penal system is the oft used route taken in order to find a subject population that is relatively rooted, geographically; however, it has been found that a number of long term heroin users rarely, if

ever, come to the attention of the authorities. In a study of the court mandated attendance in the Narcotics Prevention Program in the late 1970"s, it was found that only 18% of those in the study were over thirty years of age, indicating that the predominance of users in the over thirty age bracket have not received the attention of the correctional system (Bullington, 1977).

Lastly, in again examining the statistics found in the CAL-DADS Criminal Justice System study, it was reported that Latino perpetrators had the highest use of heroin in each category. Of specific note is that fact that Latinos accounted for one and one times the rate of use of heroin in the drug violation crime category, coming in with a reported 22.7% rate (Hser, 1993).

One particular note of interest to this study is the belief that there is polysubstance abuse in the military and veteran populations, often with alcohol as the primary drug of choice, due in large part to its legal status (Hawkins, 1985). Mentioned earlier in this review was the Hawkins' study (1985) that found the link between Caucasian soldiers and amphetamine abuse, with military personnel that was receiving treatment for alcoholism.

In addition to this, Tsaung and his colleagues (1994) examined the levels of drug use and rates of relapse among primary alcoholic veterans. The researchers found that there was relatively few differences between drug users and drug

abstainers among the primary alcoholic veterans, with similarities in years of education, employment and alcohol use histories. Also found was a higher incidence of relapse in those who combined alcohol abuse with opiate use and in veterans that abused alcohol with concurrent stimulant abuse. The authors postulated that the lack of differences among the subjects denoted an equalization of sorts, with the common base of alcoholism allowing for a focus on the other variables of interest to the authors (Tsuang, et. al., 1994).

Lastly, the use of both subject's age of drug use onset and the level of completed education have been used as variables of interest in several studies. McCarthy and Anglin (1990) found there to be consistent statistical findings with regard to risk factors and drug use. Both subject's age at drug use onset and educational achievement in males was studied and the level of risk associated with these and several other factors was calculated. Multivariate analyses indicated statistical support for the main effects of both age on onset and educational achievement, thus supporting the idea of a linkage between the two as indicators of risk.

Gonet (1990) examined the effects of not only educational level completed but the existence of a substance abuse resistance program and subject's age of onset. The author found that those with higher levels of education

showed less incidence of drug use; and, if the subject had received specific training in substance abuse resistance, the incidence was even lower.

Research Question and Hypotheses

The basic query behind this study was whether there is a relationship between drug of choice and ethnic origin, and what, if any, is the relationship between the subject's age of drug use onset and the level of completed education. The first hypothesis tested was that there is a relationship between primary drug of choice and ethnic origin, and it is as follows: African-American men predominantly use cocaine of some form, Latino men primarily use heroin and Caucasian men predominantly use amphetamine of some form. The second hypothesis tested was that there will be a relationship between subject age of drug use onset and level of completed education.

Research Design and Methods

The purpose of this study was to examine the relationship between drug of choice and ethnic origin of men in a drug treatment setting. The relationship between subject's age of drug onset and level of completed education was also studied. The research utilized a Positivistic paradigm, with a descriptive approach, in that there was no supposition of causality between drug of choice and ethnic origin; the aim of a descriptive study is to accurately and precisely describe characteristics of populations and

situations, without bringing an element of 'cause and effect' into the arena, and this study did just that.

The design of the study, as previously stated, was positivistic descriptive and will entail the utilization of statistical tests to determine the extent of the relationships between the variables. The positivist paradigm was chosen mainly because the experimental questions are primarily exploratory in nature, and it did not seek to determine causality or delve into theoretical, social issues that may explain the phenomenon. In addition to this, the author did not wish to explain or formulate global opinion or supposition as to why the link between drug of choice and ethnic origin may occur. Rather, the research is foundational and its only aim is to present the incidence of relationship; this was best served by the framework of the positivist paradigm.

Subjects

The subjects included in this study were former clients, whose records were closed and stored at the Addictions Treatment Unit of the Jerry L. Pettis Veteran's Affairs Medical Center in Loma Linda, California. The files utilized were those of clients who were part of the inpatient, residential drug treatment program, as the files in this department of the setting were closely followed and maintained. The men themselves were not queried; the needs of the study were met by taking the information directly

from the file of the individual.

A total of ninety-eight (98) subjects files were selected by a computer assisted, systematically chosen selection method. Commonly, systematic sampling is quite similar to simple random sampling and, in some cases, it can be even more accurate. In addition to this, it is also shown that systematic sampling is a method that is used to gather a greater element of representation and to decrease the probability sampling error.

The randomization of the files assisted in the reliability of the study, in that with random sampling the results of the study should be replicated with more accuracy. If there were any combinations of ethnic background, such as an individual identifying as both Latino and African-American, that file was discarded so as not to obscure the findings or the decision of which ethnic category to place the client. This safeguarded the validity of the data in terms of ethnic origin.

Data Collection

The data was collected by this author, solely, by annotating the primary, secondary, and (if applicable) tertiary drug of choice with the corresponding ethnic origin of the subject. In addition to this, subject's current age, age of onset of primary drug, and level of completed education were also collected as pertinent variables. One variable that was treated with extra caution was that of

indicated drug of choice, to counter any possibility of confusion surrounding the terminology. It was recognized that some ambiguity might have occurred as to what was meant by primary drug of **choice** and the indication of the subject's most frequent drug of **usage**. In order to bypass this, the level and frequency of usage was tabulated in each subject in terms of primary, secondary and tertiary drug actually used, and this information was then noted. This was yet another method employed to promote the validity of the data collected.

Confidentiality was assured by assigning each file a code number. The names of the subjects were not collected, as there was no need for individual contact with the subjects. Thus, no record of the subject names was compiled. Each client reported their ethnic origin on the treatment program intake report, just prior to annotating information addressing drug of choice and corresponding usage levels.

Data Analysis

Quantitatively, the link between drug of choice and ethnic origin was examined in terms of incidence rate and racial category. The quantitative procedure utilized in this part of the research project was that of frequency statistics. Because the drug choice and ethnic categories did not meet the required cell size of at least five per grouping, the Chi-Squared statistic was not used to determine the level of relationship between the variables.

Thus, the percentage per ethnic origin category indicating use of each substance of interest (i.e. alcohol, amphetamines, cocaine and heroin) was then tabulated.

For the examination of the predicted relationship between subject's age at drug use onset and their completed level of education, the Pearson's Correlation statistical test was used. This test generated not only the correlation coefficient for the two variables, but determined the level of statistical probability, as well.

The focal concept investigated in this study was substance abuse. The construct for the study was the level to which ethnic origin of the subject was related to the primary drug of choice of the user. The variable of ethnic origin was determined by the self report of the subject on the intake assessment report, completed by the subject upon entry to the treatment program. The corresponding primary drug of choice is also derived from the client's self report in the intake assessment. This variable was double checked for accuracy by the researcher, in that the level of incidence of actual use was tabulated for the subject's primary, secondary and tertiary drug listing.

As stated previously, it was anticipated that the study would find African-American men predominantly use cocaine of some form, Latino men use heroin, primarily, and Caucasian men predominantly use amphetamine of some form. In addition to this, it was predicted that there would be a relationship

between the subject's age at onset of drug use and level of completed education.

Results

The data generated in the study produced a variety of results. The majority of Caucasian men abused alcohol; 49.1% indicated that alcohol was their primary drug of choice. Amphetamine abuse, however, ranked second in frequency, with 36.8% of Caucasian men noting the drug as the primary substance abused; see Table 1.

TABLE 1: PERCENTAGES OF PRIMARY DRUG CHOICE BY CAUCASIAN MEN

	ALCOHOL	AMPHET-AMINES	COCAINE	HEROIN
FREQUENCY	N = 28	N = 21	N = 6	N = 2
PERCENT	49.1%	36.8%	10.5%	3.5%

In addition to this, it was found that amphetamines were ranked second, only behind nicotine use, as the most frequent secondary drug of choice within the Caucasian population.

Upon examining the findings generated by the African-American subjects, cocaine had the highest reported positive

response rate as the primary drug of choice (63.6%); see Table 2.

TABLE 2: PERCENTAGES OF PRIMARY DRUG CHOICE BY AFRICAN-AMERICAN MEN

	ALCOHOL	AMPHET-AMINES	COCAINE	HEROIN
FREQUENCY	N = 7	N = 0	N = 14	N = 0
PERCENT	31.8%	0%	63.6%	0%

The population of Latino men predominantly indicated alcohol as their primary drug of choice, with 42.1% denoting alcohol when queried. Heroin, however, ranked closely behind, with 31.6% of Latino men reporting it as the most frequently abused substance; see Table 3.

TABLE 3: PERCENTAGES OF PRIMARY DRUG CHOICE BY LATINO MEN

	ALCOHOL	AMPHET-AMINES	COCAINE	HEROIN
FREQUENCY	N = 8	N = 3	N = 1	N = 6
PERCENT	42.1%	15.8%	5.3%	31.6%

A series of correlational tests were run to determine

the level of relationship, if any, between the subject's age at onset of drug use and completed level of education. Testing all subjects, across all ethnic backgrounds, generated a statistically significant result [r = .1981, p < .025], indicating a relationship between age of onset and level of completed education. Within the hypothesized ethnic origin and primary drug of choice matchings, a statistically significant correlation was found only in the African-American/Cocaine group [r = .6177, p < .009]. The two remaining categories yielded nonsignificant results; see Table 4.

TABLE 4: CORRELATIONS BETWEEN AGE OF ONSET AND LEVEL OF EDUCATION BY ETHNICITY/DRUG CATEGORY

	ALL ETHNI-CITIES	CAUCASIAN/ AMPHET'S.	AF.-AMER./ COCAINE	LATINO/ HEROIN
PEARSON r COEFF.	r = .1981 **	r = .0771	r = .6177 **	r = .2646
PROBA-BILITY	P < .025	non-sig.	P < .009	non-sig.

Further correlational tests were run to determine if a link existed between subject's age of drug use onset and level of completed education, depending upon the primary drug of choice indicated (regardless of the subject's ethnic

category). A significant correlation was found in the population that indicated cocaine as their primary drug of choice [r = .4461, p < .021]. Statistical significance was also found in the group that indicated heroin as their primary drug of choice [r = .8111, p < .007]. Further examination of age onset and completed education levels in the populations that indicated alcohol or amphetamines as the primary drug of choice generated nonsignificant statistical results; see Table 5.

TABLE 5: CORRELATIONS BETWEEN AGE OF ONSET AND EDUCATION LEVEL BY PRIMARY DRUG OF CHOICE CATEGORIES

	ALCOHOL	AMPHET-AMINES	COCAINE	HEROIN
PEARSON r COEFF.	r =.2017	r =.0833	r =.4461 **	r =.8111 **
PROBA-BILITY	non-sig.	non-sig.	p < .021	p < .007

Discussion

Upon examination of the data generated, there were both support and lack of support for the research hypotheses. The first hypothesis, because it was comprised of three premises, was partially supported. The majority of the Caucasian population entered treatment with alcohol as the primary drug of choice; however, amphetamine use ranked

closely behind in second.

A similar finding emerged in the Latino population category, with the subjects most frequently indicating alcohol as the primary drug of choice. Again, though, this was followed by the predicted drug of choice, heroin, as the second highest drug of choice noted upon treatment entry.

It was only in the African-American population that the proposed primary drug of choice (cocaine) use was found. Almost two-thirds of the African-American subjects indicated cocaine or crack as the primary drug of choice upon treatment entry. This was followed in frequency by alcohol as the second highest presenting drug of choice among African-American subjects.

The second hypothesis, which predicted a relationship between the subject's age at drug use onset and the corresponding level of completed education, found statistically significant support. Across all ethnicities, it was found that the subjects who began their substance use at an earlier age completed less education than subjects that started drug use later in life.

Further examination found that the African-American users of cocaine had the highest positive correlation between age of onset and level of completed education; the Caucasian amphetamine users and Latino heroin users did not demonstrate statistically significant relationships between age of onset and education level. Breaking the results down

in terms of primary drug of choice, the subjects (regardless of ethnicity) that were predominantly cocaine users and subjects that indicated primary heroin use generated a statistically significant correlation between age of onset and level of completed education. Those noting primary alcohol or amphetamine use did not show a significant relationship between onset age and education level.

The results of the study tend to support and replicate the prior research in this area. There appeared to be definite trends of use in terms of ethnicity and primary drug of choice; however, the unexpected multitude of subjects that entered treatment with alcohol as the primary drug of choice shifted the results of the study. While previous research has noted the incidence of alcoholism in military veterans (Hawkins, et. al., 1985; Tsuang, et. al., 1993), it was not anticipated that the number of subjects indicating alcohol in this study would be so effuse.

If the element of alcohol was disregarded in the study, the research hypotheses would have found statistical support. Amphetamine use ranked second only behind alcohol in the Caucasian subject population, while Latinos noted heroin use second only to alcohol as the primary drug of choice. This finding is consistent with the Hawkins and colleagues study (1985), that showed amphetamine abuse ranking second in frequency; however, in that study, it was marijuana that was noted as the most frequently used

substance in the Caucasian population.

The significant correlation found between subject's age at drug use onset and the corresponding level of completed education supports the findings and trends indicated in earlier research (Gonet, 1990; McCarthy, et al., 1990). Both studies noted the variables as risk factors and areas that should be considered when examining substance abuse and programs designed toward prevention; the findings in this study support just such a notion.

As noted earlier, it was not anticipated that the number of subjects noting alcohol as their primary drug of choice would have been so high. This confounding variable was factored out whenever possible in the data analysis, but the sheer number of those indicating alcohol as the primary drug of choice (approximately forty-three percent) discouraged the idea of eliminating these subjects altogether. In re-examining Tsuang and colleagues study (1993), though, if the alcohol variable is considered a non-discriminating variable within the sample, the matching between rates of relapse and other variables of interest could then be considered with more clarity. This in mind, the ethno-specific matchings of drug use would have supported the main hypothesis of this study.

One limitation of this study was the use of but one treatment facility; this restricts the arena of generalizability to those who have received treatment for

substance abuse from a Veteran's Affairs program. In addition, the use of an all male sample population also hampers the generalizability of the research.

The results of this study, however, can be added to the general body of knowledge surrounding substance abuse and military veterans. While in some aspects it replicated the findings of previous research, it also added the variables of "level of completed education,' and "age of drug use onset" and examined their relationship. This, then, contributes to the ability to generalize this research in addition to expanding the amount of currently held knowledge surrounding drug use and military veterans.

Future research may want to examine the effects, if any, on the gender of the subjects, to determine if there are any sex differences in ethnicity and primary drug choice. In addition to this, a questioning from several different treatment facilities in various regions of the country may expose geographic differences in terms of drug choice and ethnicity.

In conclusion, this study demonstrated that there are circumstances in which knowledge of a particular ethnic category could possibly indicate a prevalent drug of choice. It cannot be asserted strongly enough that this is only one of many possible tools to determine various characteristics of a grouping, and should not be used to apply any negative connotation to any ethnic category. This study has simply

shown that the knowledge of a particular trait or habit of a grouping can assist in the formulation of community planning and the distribution of fiscal resources.

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