Drug Use among Former Major League Baseball Players

Dr. Michael P. Mahoney Coordinator: Sports and Entertainment Facility Management Associate Professor, Department of Recreation Administration California State University, Fresno 5310 North Campus Drive, M/S PH 103 Fresno, CA 93740-8019, USA.

Dr. Ted Tedrick

Professor (retired), Sport & Recreation Management Temple University 1810 N. 13th Street, Speakman Hall Philadelphia, PA, 19122, USA.

Dr. Michael W. Jackson Professor, Sport & Recreation Management Temple University 1810 N. 13th Street, Speakman Hall, 372 Philadelphia, PA, 19122, USA.

Dr. Kara Zografos

Associate Professor, Department of Public Health California State University, Fresno 2345 E. San Ramon Avenue M/S MH 30 Fresno, CA 93740-8031, USA.

Abstract

Substance abuse is prevalent in society, and with professional sport. Policies and educational efforts often focus on prolonging careers of athletes, yet few extend to the post-career phase. This study investigated drug use during and after careers ended among 16 retired former Major League Baseball (MLB) players. Circumstances of use, injuries as a cause, and effects on careers, family, and friends during and post-career were assessed. Differences between pitchers and position players were examined. Qualitative data were obtained through personal interviews. Themes included increasing use during careers, with a slight decrease near the end, and negative impacts on families. Many suggested careers were affected (positive and negative) through use, and effects were more pronounced for pitchers.

Key Words: Substance Abuse, Athletes, Former Major League Baseball Players

1. Introduction

Substance abuse is prevalent in society (Substance Abuse and Mental Health Services Administration [SAMHSA], 2010), and withprofessional sport (Malone, 1991). Its connections are easily viewed or heard across media and social networking forums (blogs, Facebook, tweets, print, radio, television, YouTube, etc.), with accounts of elite athletes who have indulged in the use of illegal drugs or performance-enhancing substances (TheWeedblog, 2012). Major League Baseball (MLB) is not exempt to the effects of drug use.Players', their careers and families, and teammates are all susceptible. While recent media attention, congressional inquiry, and some player testimony have detailed the use of performance-enhancing drugs, e.g., human growth hormone, steroids, etc., this investigation explored drug use exclusive toamphetamines, cocaine, heroin, marijuana, opiates, and phencyclidine by former MLB players.

Baseball lore is replete with reputations for prodigious off-field drug abuse among former players includingDockEllis, Dwight Gooden, Keith Hernandez, Steve Howe, Darrell Porter, DarrylStrawberry, et al. to match or surpass on-field performance. Additionally, America's national pastime has not been able to hide from investigative articles, books, congressional hearings, and, in rare instances, player confessions, or inferences about performance-enhancing substances (Barry Bonds, Melky Cabrera, Ken Caminiti, Jose Canseco, Bartolo Colon, Jason Giambi, Mark McGwire, Guillermo Mota, Rafael Palmeiro, Andy Pettitte, Manny Ramirez, Alex Rodriquez, Sammy Sosa, et al.). Accounts of MLB players performing under the influence of drugs include a no-hitter by Ellis, and many others seeking an advantage via stimulants (Red & Vinton, 2009).

The sport of baseball allows for the athlete to have the quintessential individual impact, yet authors askhas the pressure on players to survive become prodigious they have reached for either a "release" or a "competitive edge" through drugs? Is engaging in drug use a societal expectation for athletes to win at all costs? Have the rewards become so great, and the status connected with professional baseball so lofty, that society accepts success by any means possible? Drug use is not merely an avenue for individuals seeking to alter their state of consciousness, it is also a tool perceived to assist performance.

MLB club management is aware that a player's career represents a multi-million dollar investment and that drug problems can short-circuit a promising career. Educational programs such as The Employee Assistance Program (EAP) are designed to assist minor and major league players and personnel. The Office of the Commissioner of MLB operates a Rookie Career Development Program (RCDP) in which 90 of the top prospects receive training on the dangers of drug abuse. Anecdotal assessments of the program's effectiveness, however; have been inconclusive considering a multitude of player incidents during the programs 20-year-plus duration. Teams are aware that problems begun during players' careers can extend into retirement (Mahoney &Tedrick, 2010). Thus, awareness exists in MLB that drug misuse can have serious consequences on many levels and attempts are being made to educate players and staff.

The need to explore the issue of drug use of former MLB players is apparent when numerous factors are considered. First, teams undertake a significant investment in a player's career and to lose a player prematurely because of drug usage is not only a personal loss, but a business loss as well. Many teams display long-term interest when playing careers are over by keeping certain players in the "family" as coaches, scouts, front office personnel, or as team broadcasters. Generally,most players can expect a long life when playing days are behind them, however; drug problems may worsen post-career.

A qualitative investigation where players could express their feelings about the meaning of drugs in their lives and careers appears to be a logical approach. The purpose of thisstudy, therefore; was to explore, in a qualitative fashion, how selected former MLB players felt about their use of non-steroidal drugs [amphetamines, cocaine, heroin, marijuana, opiates, and phencyclidine] in the following areas: 1) the circumstances of use (when drug usage began, how drugs were obtained, where, with whom, and how much they used), 2) if drug use was connected to injuries, and the effects of use on their careers, and 3) if drug use had an impact on family and friends, and if it affected their post-career lives.

1.1. Literature review

Since the purposes of the study focused on the circumstances of drug use, the effects of use upon careers and injuries as a factor in use, the negative impacts on families, and drug use during post-career, the following review is presented using the above organizational format. The review concludes with a discussion of methodological and theoretical issues.

1.2. Circumstances of drug use

A number of factors including the history of drug use within the family, the age at which these players begin to use, and the general environment of use within the context of the sport are critical variables when exploring drug use over a career. Stressful events (e.g., being booed by 50,000 people, ridiculed across media platforms, playing with an injury, or being placed on the disabled list) can influence an individual's use of drugs or alcohol (Mahoney&Tedrick, 2010).Elite athletes are exposed to stress as they are constantly evaluated based on their outcomes (wins/losses, batting average, earned run average, etc.), and these outcomes are tied to financial and social rewards. Once a player reaches a high level of performance, he may use drugs based on a belief (expectancy theory) that use will result in specific effects (Bandura, 1977), i.e., a reduction in tension.As such, drug use is easily connected to sport.

We (United States) are a drug taking society (Edwards, 2010) and many baseball prospects, similar to other young adults, fall victim to drug use (Leventhal, 2010). Later in their teens/twenties as part of competing at the university level or minor leagues athletes may be tempted to experiment with drug use. Minor league life includes many stressors and down time where boredom exists resulting in opportunities for substance abuse (Mahoney and Tedrick).

Red and Vinton(2009) reported that despite the 2006 agreed upon ban by MLB and the Major League Baseball Players Association of performance-enhancing substances, amphetamine use continues in MLB as a steady number of players filed claims to have attention deficit disorder thus excusing them from punishment if testing proved positive. This is known as a therapeutic use exemption (TUE). A total of 28 players filed for TUE in 2006, 103 in 2007, and 108 in 2008 (Red & Vinton, 2009).In 2012, MLB approved medical uses for amphetamines and similar stimulant drugs for119 players for attention deficit disorder, hypertension, and hypogonadism. Results from the 2012 Public Report of Major League Baseball's Joint Drug Prevention and Treatment Program resulted in 5,136 tests for performance-enhancing substances or stimulants in which18 tests indicated adverse analytical findings that resulted in discipline. Substances included Clenbuterol, Clostebol, Tamoxifen, Testosterone, Stimulants, Adderall, and d-amphetamine (Major League Baseball, 2012).

1.3. Effects of drugs and injuries as a cause.

Although many playing careers are well short of 20 years, from entry to the minor league system through a sustained professional career a period of 15-20 years might or may not transpire during which numerous injuries would occur. Injury and the inability to play might be causes for increased drug use. Furthermore, effects from use, both short-term, such as difficulties with daily training, and long-term, including slowed reaction time could be anticipated.

Amongreasons for drug use cited by athletes were to have a better body condition (Özdemir, Nur, Bagcivan, Bulut, Sümer, &Tezeren, 2005), a mode of release from tension during the competitive season (Reilly, 2005), and to permit continued performance during periods of injury, and for recreational use in allowing a mind-altering experience (Nuzzo& Waller, 1988). Amphetamines, cocaine, heroin, marijuana, opiates, and phencyclidinecould serve the above purposes. A recent survey of college athletes found the use of marijuana increasing, although the use of amphetamines was slightly decreasing. Over half of the respondents using amphetamines indicated use during both their competitive season and their off season, and a majority of those using amphetamines indicated use after practice and/or competition (NCAA Research Staff, 2012). Besides injuries, researchers probing the "why" of drug use have focused on tension reduction or coping (Cooper, Russell, Skinner &Windle, 1992), stress or anxiety reduction(Baer, 2002), seeking a competitive edge (Ambrose, 2004) or a combination of factors (Levinthal, 2010). The above reasons would fit demands placed on professional baseball players.

The effects of substance abuse and misuse on systems and performance have been well-documented. Paranoia, delusions, hallucinations, and violent behaviors are effects of amphetamine use (Levinthal, 2010). Reaction time, information processing, and fine and complex motor skills, all of which are crucial to professional athletes, are affected when either amphetamines, cocaine, heroin, marijuana, opiates, or phencyclidine are present in the system. Distorted perceptions, memory impairment, difficulty with thinking and solving problems are associated with marijuana use (National Institutes of Health, 2010a). Athletes who smoke marijuana the night before a game may have impaired abilities for as long as 24 to 36 hours (Wadler, 1999). Meanwhile, disordered thinking and extreme anxiety are effects of PCP/Phencyclidine use (National Institutes of Health, 2010b). Negative effects of cocaine include irritability, disturbances in heart rhythm, and decreases in strength and endurance (Wadler, 1999). Long-term use effect of opioids (i.e., heroin), include physical dependence and addiction (National Library of Medicine, 2010).

Thomas, Dunn, Swift and Burns (2010) reported the main risks perceived by elite athletes from drug use were short-term consequences, such as physical and mental functioning, rather than long-term health consequences. Moreover, the likelihood of addiction to drugs makes them especially devastating to sports careers (Nuzzo& Waller, 1988). In this investigation, players were asked about specific effects they could remember in certain games and long-term effects which may have shortened their careers. The 2009 National Survey on Drug Use and Health (NSDUH) reported 21.8 million Americans aged 12 and older were illicit drug users (SAMHSA, 2010), and marijuana was the most commonly used illicit drug (16.7 million). Substantial drug use is associated with higher levels of absenteeism and frequent job changes (Larson, Eyerman, Foster & Gfoerer, 2007).

While differences exist between the typical nine-to-five work setting and the work schedule of a MLB player, it could be expected that the effects of substance abuse by a professional athlete would have serious implications for day-to-day and long-term performance. Substance abuse in the workplace creates many problems such as absenteeism, accidents, legal and medical expenses, and decreased productivity and morale (Hazelden, 2010). Employee substance abuse is a problem that extends beyond the individual substance user. Co-worker job performance and attitudes are often negatively affected (Lehman, Farabee& Bennett, 1998).

1.4. Impacts on families and post-career lives.

Excessive drug use produces many negative outcomes and impacts to those closest to the user – family and friends (ReachOut.com, 2013). Josh Hamilton, the 2010 American League Championship Series MVP, nearly threw away his baseball career due to drug addiction, includinga 2009 alcohol-related relapse (Verducci, 2010). In a 2007 self-reflection, Hamilton admits to family deficiencies as a husband, and father, and to his daily battle with addiction (Hamilton &Keown, 2007):

I prayed to be spared another day of guilt and depression and addiction. I couldn't continue living the life of a crack addict, and I couldn't stop, either. It was a horrible downward spiral that I had to pull out of, or die (p. 1).

Darrell Porter has detailed his struggles with drugs claiming he had fooled people so well for so long that no one noticed his desperation and he concludes (Porter & Deerfield, 1984):

I hated drugs! Hated them! They had promised me happiness, ecstasy, but instead they had plunged me into a living hell! And, I was enslaved to the thing I hated; I needed drugs, craved them. I was caught – caught in a trap of my own making (p. 183).

After leaving active playing days it would seem that many opportunities exist to continue long-established habits of drug use. Until a new career is begun, ample time is present from morning to late night to use. Athletes are worshiped by the public and someone is always at the ready to buy a former player a drink, offer him a "toke", or a "pick-me-up". Events scheduled through teams such as reunions, receptions, community events, or golf tourneys provide free alcohol or opportunities for drug use. Certainly, drug usage could easily continue when playing ended and former ballplayers were asked about the nature and impact of post-career drug use.

1.5. Methodological and theoretical issues.

In terms of possible theoretical approaches, the researchers of this investigation believed that expectancy theory offered guidance when considering the causes and effects of drug use with the players interviewed. It posits that persons engage in behaviors based on a belief that the behavior will result in specific effects, positive or negative (Bandura, 1977). It was assumed that use was motivated by a desire to attain certain outcomes (i.e., to be like others in a social setting, to forget about a bad performance, to numb the pain of injury, to rebound from a night of partying and being able to play, to become the quintessential individual impact player, etc.). Player responses were analyzed to determine if use was motivated by a desire to attain certain outcomes (social comfort, numb injury pain, deal with poor performance, etc.). Expectations can be positive, such as the excitement and pleasure of use, or negative, such as knowing after effects would remain the next day (Oei&Morawska, 2004). Therefore, players' comments were interpreted with the guiding principle that behaviors and acts were guided by expected outcomes, some being positive and others being negative.

2. Methodology

Since the purpose of this study emphasized players' feelings about drug use and its effects, and because most research on athletes' drug habits have used questionnaires with quantitative analysis and descriptive statistics (Core Institute, 1998; Malone, 1991; NCAA Research Staff, 2006), a qualitative approach consisting of in-depth interviews was selected. In addition, a phenomenological framework (Henderson, 2006) was adopted which permitted players to describe their internal, subjective feelings about drug use and its impact on their lives. Phenomenology seeks to discover the lived experience of a person; it involves the intuition of the subject and the consciousness apparent during actions. It stresses causes (in this case, the reasons for drug use) and the conditions (in this case, circumstances of use) related to the phenomenon (Amedeo, 1997). The goal was to provide insight and contextual depth, while being sensitive to the values of the informant, whereas prior research has emphasized surveys. Leedy and Ormrod (2005) stressed that lengthy interviews are valuable when perspectives and understandings of situations and events are desired.

2.1. Selection of player informants.

Access to players was granted through an alumni organization of MLB. Alumni with a minimum 10-year big league careertotaled 961 and represented an active playing period of nearly 40 years, the earliest having begun in 1960, and all having retired by 1999. Former players were sent a letter seeking permission for an interviewand after two months 66 agreed to participate. Both pitchers and position players were represented. Key statistics for the group such as wins and losses, earned run average (ERA) for pitchers and times at bat, batting average, and runs batted in (RBI) for position players were compared to league averages from that time period to gain a general sense that eligible participants were similar to players from their era.

The investigation was not funded and interviews required extensive US travel, as such, it was impossible to interview every one of the 66 ex-players who were willing to participate in this study. Since qualitative studies employ purposive or smaller theoretical samples (Neuman, 2006), it was decided that one-quarter (16) of willing respondents would be selected as participants from the list of 66. A random selection was made from the pool of 66 to include 16 former players. The 16 participants of this study consisted of 9 pitchers and 7 position players.

2.2. Instrumentation.

An interview schedule focusing on the circumstances and reasons for drug use and its impact on careers, family, and friends was developed based upon the research purposes guiding the study, and previous work cited in the review of literature. The first area of focus was 'circumstances of use.' Two representative questions included: "with whom, and in which settings, did you engage in drug use during your MLB experience?"; and "what was your level of drug use during your MLB experience?"The response options for this question included: daily; weekly; and monthly. The next area of focus involved 'connection to injuries and effects on career.' Two representative questions included: "how did any injuries during your MLB experience?"The third area of focus was 'impact on family/friends and post-career life'. Two representative questions included: "were there, and if so, what effect did drug-related incidents and/or interventions have upon your career and life during your MLB experience?"; and "after retirement from your MLB playing experience, did drug use affect your life?"

Interview questions were formulated from the reviewed literature and critiqued by a panel of 5 experts connected with MLB having extensive experience as players, in management, or working in drug counseling.Direct quotations from the interview questions were seen as raw data revealing respondents' emotions, the ways they organized their world, their thoughts about what happened, their experiences, and their basic perceptions (Patton, 2002).To demonstrate validity, experts were asked if each survey item/question should be included and how it should be revised, if necessary. Comments were analyzed and modifications were made to questions where at least three suggested a change. A final interview schedule with revisions from input was approved by the panel.

2.3. Data collection.

Approval from a university human subjects committee was grantedprior to arranging interviews. The 16 participants were interviewed over a period of five months in their homes or in an agreed-upon location. Audio recordings were used for each interview. Anonymity was assured by using no names in the interview process and by assigning alphabetical letters to intervieweesto keep track of interviews. Any comment such as a year or an award which might have identified a former player was noted with an (xxxxx) in the interview transcript.

2.4. Analysis of data.

Rigor must be displayed by qualitative researchers as they review and interpret the stories of others (Schwandt, Lincoln & Guba, 2007). As such, concerns about trustworthiness, external validity or transferability, dependability, and confirmability existed and methods were employed to minimize those concerns. Measures to ensure internal validity, as a part of trustworthiness, included lengthy engagement (a recorded interview with follow-up), and triangulation via review of transcripts and quotes by a research team and member review (all informants were sent copies of the transcribed interviews and asked to make any changes or note additional thoughts). All informants noted their approval of the transcripts and no changes were requested. Detailed, thick description of the context for each player informant using direct quotations was used as data analysis began to address external validity. Dependability and confirmability consisted of a detailed data analysis plan (transcribe, member check, write-up, select quotes) and inter-coder reliability by having investigators review each other's interpretation. Full agreement was attained in all cases.

Data were analyzed according to the four areas of focus noted earlier using the interview questions for each of those areas (circumstances, connection to injury and effects on career, impact on family/friends and post-career life, pitcher or position player differences). Descriptive statistics such as frequencies and percents were used for items of a quantitative nature, while qualitative analysis proceeded with an approach of organizing the quotes (data) around themes. Content analysis was utilized to organize the raw data themes. Quotations from the participants taken directly from the transcripts of the interviews were the unit of analysis. Narrative analysis (Kvale&Brinkmann, 2009) was used to focus on the stories told during the interview relative to structure and plot. Responses to the questions were charted for each former player by each interview question so that anonymity would be maintained. Findings were then reported in the four areas of focus using the interview questions, and themes were presented with specific quotes representative of that theme.

3. Results

3.1. Circumstances of use.

There were two primary periods when former players began using drugs: the period prior to entering professional baseball and during their career in MLB. Table 1 presents findings on the circumstances and frequency of use.Six players began using drugs before entry into professional baseball, with marijuana being the drug of choice (5 of 6 indicating). Two answered that use began in the minors (marijuana and amphetamines) and six stated that use began at the Major League level with marijuana, cocaine, and amphetamines reported. Findings relative to the time of initial use broadly correlate with the 2010 NSDUH report that average age of first illicit drug use of those aged 12 to 49 was 17.6, inclusive of marijuana at age 17 and stimulants at 21.5 years (SAMHSA, 2010). Student athletes typically report use commences in high school or before (NCAA Research Staff, 2012).

Players obtained drugs from a variety of sources including doctors, relatives, team personnel, and trainers, however; the two primary sources were friends and teammates. The home, hotel bars, restaurants, and team flights were primary places for securing drugs. The predominant location for obtaining drugs was the clubhouse, with 11 players, with exception of the last two years of their playing career, and eight players during the final two years of their playing career. One aspect of professional baseball cited by players in interviews (emergent theme) was life on the road or "road behavior." Circumstances seemed to fuel drug use, "It was drugs, alcohol, and sex," and one player recounted, "On the road I'd step behind the team bus smoking a joint with people leaving the ballpark and act like you're not doing anything - like you are smoking a cigarette." Road behavior was often linked to "groupies" and the combination of sex and drugs as told by one player. "The dynamics on the road are a whole different thing than the dynamics at home." Gmelch and San Antonio (1998) in interviews with players, wives, girlfriends, and groupies found that minor league life and travel on the road in the majors provided many opportunities for females to seek out players in social settings accompanied by drugs and sex. The motives of groupies can range from short-term goals of having a good time or being seen with a prominent, good-looking athlete to longer-term motives of landing a future star in the minors and following along the journey to the majors. In the major leagues, many wives are aware of the temptations on the road with some confronting reality when the "little black book" with names in different cities is found one day (Gmelch& San Antonio, 2001), and married players in the current study stated that their behavior on the road was drastically different from their home or offseason lifestyle.

When players reached the major leagues, the most frequent levels of drug use were four weekly and two daily. Prior to entering baseball in the minor leagues, 10 players reported no use of drugs, two indicated monthly use, and two said they used less than once a month. Frequent drug use was noted by one player reporting weekly and another player reporting daily participation.During the minor league experience, eight players did not engage in drug use. Three players were infrequent users (less than once a month) and three used weekly. Only two players reported a daily habit. Players reported a notable increase in use on a weekly basis from the minors to the time they reached the major league level. In the majors, six players stated weekly use, two daily, two monthly, four less than once a month, and only two abstained. Non-users decreased from eightto two from the minor leagues to the majors.

The general pattern noted when contrasting use during the last two years of their careers was one player of less use per week or month and more players stopping completely. Five of fourteen players who reported use during their careers had stopped during these last years in the majors, including one who had undergone professional treatment. At this stage, no players reported daily use while two used monthly and two less than monthly.

3.2. Injury and effects on career

Injuries, playing through injuries and pain, seeking a competitive advantage, and being placed on the disabled list were cited as reasons for drug use and the ensuing effects of the quartet were often critical to careers. "You're not playing tomorrow (because of an injury)....you didn't have to save yourself for a game." One player mentioned the difficulties of the game combined with an injury led him to "take drugs... booze, or you do both." Another addressed the issues of drugs administered by team personnel and his self-indulgence of marijuana when injured, "Because an injury is frustrating anyway, so getting high, smoking weed sometimes makes you irrational.... pot can change how you react to daily things." Here players' descriptions of drug use during a period of injury were similar to the findings of Nuzzo and Waller (1988) in that addiction to drugs makes them especially devastating to sports careers.

Drug use affected careers in numerous ways prior to and throughout the major league years. One player noted drug incidents created a negative reputation for him and it reflected in his being selected lower in baseball's (MLB) amateur draft. One player indicated mental battles with teammates and marijuana use by half his team, "Once someone on the team knows you smoke pot, they might have a tendency to change their way of thinking about you. Half the guys were getting high and half weren't." This comment closely resembled the description of alienation noted by Lehman et al. (1998). Whether the use is actual or perceived, non-users may distance themselves from those thought to be using. Another player alluded to how anger would take hold on the field, "There was nowhere to get high on the baseball field, so I would explode in anger." Irritability and perceptual difficulties have been noted as significant effects of use in the literature (National Institutes of Health, 2010a; Walder, 1999). One player remembered a positive aspect, "I think it (marijuana) helped me deal with the loneliness better. I think it helped me deal with sleeping better."

Eight players recounted significant effects during their major league tenure, except the last two years. Instances included: having a tarnished image due to a drug scandal, serving jail time, being ejected from games, being suspended by MLB, and losing physical and mental control. One player reported the attitude of officials as, "They knew and I was tolerated as long as I won." Another player spoke of the positive effect an intervention had on his career and life, "It was affecting every aspect of my life to the point where it brought me to my knees and people did an intervention on me...." One emerging theme was summed up by the following comment, "You're beaning up during the day and then you can't sleep at night, so you're drinking to get to sleep and that cycle starts."

Similar to anecdotal evidence, amphetamines were supplied to players by team personnel as reported by one player:

My pitching coach says, here try one of these – and he handed me a black beauty. I'd never seen these before. I said, how strong is this? He said, I don't know, just take it – you'll be all right. Well, it was 25 milligrams – I was throwing the ball really hard, but I was throwing so hard, I wasn't controlling my mechanics. I couldn't control my body – I was on edge.

The above situation aligned with Ambrose's (2004) comments that athletes often use drugs when seeking a competitive advantage, although results are not guaranteed.

Finally, four players indicated use had an impact ranging from negligible to significant in the last two years of their careers. Most drug use had declined in this last phase so the effects were probably due to long-term exposure. Those perceiving minor effects expressed the idea that use was not part of the regular routine at this stage – it was a social thing. As to the negative, one spoke of the cumulative effects – the toll taken as years added up.

Those long nights, restless sleep and the drinking and f_k king, and all that.... and the fact you're playing 162 in 183 days. It all wears on you, and the more years you put back to back, the attrition, it just starts taking away from you.

3.3. Impacts on friends/family and post-career life.

The effects of drug use on relationships with family and friends were more pronounced after players reached the majors, with nearly half describing problems in the majors prior to the last two years of their careers. Only two players noted family issues linked to drug use prior to or during their minor league careers.

Comments revealed that relationships with family members or wives were not always perfect and drugs could be used as a mechanism to deal with such interactions. In other cases, it appeared that use on the part of the player was a source of existing drug patterns within the family. One player gave this account:

It affected the way we shared each other's compassion and love in which the drug use had major effects on separating us.... the more she tried to change you, the more you didn't want anyone to change you. It killed relationships. It kills marriages.

Another player mentioned money spent on drugs which took away from the family. One player described becoming closer to his father as they would drink and smoke pot together while his mother saw him throwing his career away and his future wife wondered if she should get involved in the situation. Two also mentioned amphetamine use resulting in sleeplessness; they would be wound-up at night making sleep difficult for the spouse as well. This situation carried into the last two years in the majors.

Marital problems were notable with nine players referencing issues or divorce by career's end or in retirement. In addition to drug use, another factor linked to marital problems was the spouse no longer being a part of the "in crowd." Gmelch (2000) estimated that about one-third of player marriages are likely to break up, with most in the first years after retiring, and in about three-fourths of the cases the wife leaves the ex-player. The loss of the big paycheck, staying out late, and the inability to let go of road habits including drug use, and being around the house for long periods, all create potential problems in the early post-career years. Hoffman and Froemke (2007) also noted difficulties in personal relationships as a theme of the addiction research.

Other references to problems during retirement were captured in the following phrases, "the stigma of being a drug user is always there," and "People know about your life, you've lived in a fishbowl." Financial difficulties were seen "in the repercussions I had caused myself during my playing career." Thus, problems and consequences of use were not simply short-term; the effects could extend for years in ways, such as attitudes of others or lost income, that would never be replaced.

3.4. Pitcher or position player differences.

This study explored any differences in drug use habits and effects for position players and pitchers based upon playing schedules, daily versus pitching every fourth or fifth day. Areas of significance emerged as seven out of nine pitchers and one position player reported their use of drugs did have family effects (See Table 2). Three players did undergo substance abuse related treatment during their career. Adverse effects on playing careers due to drug usewere reported by six of the pitchers. Conversely, four of the position player were effects from drug use. A key issue, as indicated by four of the pitchers and one position player were effects from drug use in retirement following professional baseball. Within this area of significance, two pitcherssuffered incarceration and other legal issues in their post-playing career life.

For pitchers, the dominant theme was that their careers and families suffered from the consequences of drug use. Starting pitchers indulged more frequently than position players, perhaps because their next start was several days off. One pitcher referenced that his drug use included "cocaine when out looking for girls, amphetamines on game day, and marijuana and alcohol when not pitching." Another pitcher commented, "I played stoned lots of times" in reference to substance use during the season. One position played indicated he "was getting a little bit older and (he) needed to stay at a certain level", thus his rationale for drug use. Another position player, speaking of injuries and the pressure to still perform, noted players became "hooked" on painkillers distributed by team trainers and doctors. The last two years of the playing career was mentioned by a position player as the period of "highest risk for abuse" as players try to stay at a certain level or to "hang on." Though overall, the pattern as revealed before was one of less use or stopping use in the last phase of the career. Perhaps there was shift during the latter years to the use of stimulants or pain killers rather than other drugs.

4. Discussion

In discussing circumstances of use (when, where, how often, and how long) for the 16 professional ballplayers interviewed, two periods stood out – the years prior to entering professional baseball, with 6 of 16beginning use of drugs, and the major league years, with only 2 indicating they did not take drugs or stimulants. Drugs were obtained through many sources and locations: friends; other players; and team personnel were frequently mentioned, while the clubhouse, hotel locations, and other social settings were popular places to secure drugs.

An emergent theme from players was the particular mention of "road behavior" where alcohol and drug use fueled a party atmosphere which included "groupies." As to the amount of use, the pattern was one of increasing use throughout the majors with a tapering off during the last two years of their careers. Marijuana and cocaine were popular choices with amphetamines often used to "keep an edge."

Injuries, time on the disabled list, and attempting to keep a competitive advantage were cited as reasons for taking drugs. Effects of use were noted even prior to entry into professional baseball, with one player saying he had been selected lower in the draft because of his known use. Once in the system, players who did not use often reacted differently to those who did. Anger on the field and irritability were common effects. A positive benefit of marijuana, according to one player, was its assistance in dealing with loneliness and sleeplessness. Eight of the sixteen referred to major incidents occurring from the inability to control use. These included a tarnished image following a drug scandal, time spent in jail, being ejected from games and even suffering a suspension from MLB. As careers entered the final stage, a summary notion was that use over time had taken a toll in various ways and effects had been cumulative.

Drug use was analyzed with attention to impacts on family and friends inclusive of the post-career years. Relationships and marriages were severely tested according to the players, not only due to drugs, but, in addition, the lifestyle and behavior on the road brought many challenges to existing relationships. A few cited drugs as a way to deal with marital difficulties, and in one case a player and his father smoked marijuana together. One-half of the group referenced marital problems or divorce during or after the end of the career, a finding comparable to work completed by Gmelch (2000). Conditions in post-career life often supported the use of drugs with ample free time available, the inability to forget behavior learned while on road trips, and the need to replace the attention they had been granted as major league athletes.

As a sub problem of the investigation, use and effects were explored for pitchers as contrasted with every-day, position players. While the division here resulted in small groups with cautions for broad generalizability, differences showed pitchers to use more and suffer greater negative effects when compared to position players. Three-quarters of pitchers mentioned family problems due to drugs and one-third of them had undergone a substance abuse program. Speculation is offered later as to playing schedule and preparation differences between the two groups as reasons, and suggestions are made for further investigation. Throughout this paper numerous participants indicated stresses associated with being a professional athlete – be it the pressures to sustain their respective jobs in the starting lineup, or changes in family structure and retirement as contributing factors to drug use. A number of former MLB players reported positive expectancy believing that the drug use would reduce stress or help to alleviate pain through injury. Researchers such as Levinthal (2010) are increasingly focused upon the role of expectations – what individuals believe drugs will do to or do for them. If trainers, coaches and teammates tout the use of drugs, it is likely that players have the expectation that positive effects will be seen regarding stimulants and pain reducers.

Expectancy (Bandura, 1977), tension reduction or coping (Cooper et al., 1992), stress-or anxiety-based substance use (Baer, 2002), social camaraderie (LaBrie, Hummer & Pederson, 2007), seeking a competitive edge (Ambrose, 2004), and a "combination of factors" (Levinthal, 2010) are theories as to the "whys" of drug use applicable to elite athletes. Players' comments aligned with these frameworks. Expectancy theory (Bandura, 1997) incorporates both positive and negative outcomes. On the positive side, one player spoke of the positive effect an intervention had on his career and life and another told how marijuana helped with sleeplessness and loneliness. On the negative side, many players spoke of long-term impacts, such as shortening careers. Some players felt they needed stimulants in the latter stages to be effective, and others felt they were not able to give their best due to the toll drugs had taken on their abilities. A significant personal outcome was the effect of use in killing relationships and marriages.

Tension and stress/anxiety-based substance use were frequent themes by players. The unhappiness and anxiety connected with imperfect family dynamics was noted as a cause for other players' substance use. Another player mentioned money spent on drugs which took away from the family. Finally, social camaraderie was shared in players' stories of evening and on-the-road behavior.

4.1. Limitations and future research.

Regarding limitations of the study focusing on the sample, 66 out of a pool of 961 potential participants agreed to be interviewed, and 16 from the 66 were selected.

One reason for not agreeing to participate may have been that players had been "burned in the past" by agents, friends, management, or the media. Perhaps having one's name tarnished by the connection of drug use to one's career may have been a deciding factor for some. It is difficult to say if the 16 represented the entire universe of former players, yet the issues and impacts appeared to be similar to other reports (Klapisch, 1996; Nuzzo& Waller, 1988; Porter & Deerfield, 1984). An analysis was completed of key statistics of the sample compared to all major leaguers and averages were similar. The sub-issue comparing pitchers with position players divided the 16 into smaller groups. Future research should expand the numbers in these two groups.

From a historical perspective, the decades represented by the players' careers extended from the 1960's to the 1990's. Attitudes, usage patterns, favored drugs, etc. certainly could have changed over that period. This study was not framed as a historical exploration; rather it was focused on gaining personal accounts of effects for a selected group of players. Steroidal use and drugs were delimited from the study and effects here could have impacted use of drugs analyzed in this study. Temporal issues for players in various stages of their careers during this period should also be acknowledged. Further research using limited time periods, a decade or similar framework, is one possible approach.

Until testing in 2006, both minor and major leagues had a tradition of availability and acceptance of amphetamines, perhaps the most widely abused substance in professional baseball. In the 1960s and 1970s, "greenies" or amphetamines, were distributed within the clubhouse by the club trainer as mentioned by several players interviewed in this study. They spoke of "beaning-up" or taking "greenies" as a way of enduring a 162 game schedule with day games following night games, red-eye flights, demands to perform, and countless distractions including groupies, sex, and a pennant race. As one player indicated, "You're on stage to perform and some days you don't feel like performing."

In considering solutions to curb substance use/misuse/abuse, the utilization of educational programs and counseling by outside sources are possibilities, yet players may be quite skeptical. Players are often secluded and may rely on a few friends and teammates, or their agent; they may have no desire to open up to an outsider. Additionally, the culture of the clubhouse, as reported, was one where coaches or trainers suggested the use of a stimulant or pain killer; this was part of the indoctrination into the world of professional baseball.

One example of an educational program sponsored by the Commissioner's Office and the MLB Player's Association is the Rookie Career Development Program which includes sessions on substance abuse (Major League Baseball Players Association, 2010). Role playing and counseling sessions using psychiatrists and explayers are aimed at informing rookies of the dangers present. Long-term data about the effectiveness of such attempts were not available, but it is clear from the accounts in this study that the negative effects of drug use on players' lives and careers are real and attempts must be made. Perhaps hearing from former players, and studies such as this one using players who have experienced drug-related problems, will assist younger professionals, their agents, and those in administrative positions with MLB and its member Clubs. The context of alcohol and other drug education programs within MLB exists in a complex and difficult environment inclusive of the Office of the Commissioner of Baseball, member teams, the players' union, agents, and players.

Practical solutions to substance use, misuse, and abuse need to focus on the latter stages of players' careers extending into the transition period of post-career life. Often players feel totally cut off and adrift when they retire from the game (Gmelch, 2000). Missing the camaraderie with their former teammates, players may become depressed and self-medicate via misuse of licit drugs or engage in other drug use. Team personnel should be alert to weight gain or loss, moods swings, the signs of excessive drinking or drug use as a player's career winds down and offer support in any form. A peer or mentor model where a former player or staff person would be available to help the player in need is a possibility. The Retired Players Association and alumni groups from the various teams should promote gatherings where former players can socialize and offer counseling to any player willing to take advantage of such services. Healthy lifestyles must be promoted through educational programs and encouraging retired players to stay active. Lack of exercise and difficulties with the aging process were problems noted by former NFL players, and those who were active were less likely to suffer from depression (Schwenk, Gorenflo, Dopp&Hipple, 2007).

The key point is that end-career stage and transition to post-career are critical periods where substance abuse problems may occur and teams/organizations should improve outreach to assist those in need.Future research involving the topic of drug use, and its effects on players and their careers, should explore in detail "at home" and "road behavior" as well as "in-season" and "out-of-season" patterns.

Particular attention could be paid to drug use in post-career or retirement years. There appeared to be a number of issues surrounding the transition to post-career, and substance use/misuse was noted as problematic in a number of cases. Longitudinal designs would be effective in tracking the same players over an extended period of time.

Further investigation into pitcher and position player differences and the changing roles of each is warranted – as the career lengthens how many pitchers move from a starting role to a relief role, and how many position players move to a bench, or specialty role, e.g., designated hitter? These are factors that may be related to drug use and frequency over time. To what degree is the schedule of preparation for pitchers a factor? Are psychological differences a factor – how is a starter or a closer different from a position player in terms of risk attitude, and how might this impact drug use or non-use? Is there a decline in drug use in the latter years, and are shifts in use more focused on pain reduction and use of certain stimulants that may extend the career?

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Table 1: Level of Drug UseAmong Selected FormerMLB Players				
	Leading Up to Entering Professional Baseball	During Minor League Baseball Experience	During Major League Baseball Experience, With Exception of Last Two Years	During the Last Two Years of Major League Baseball Experience
No Drug Use	10	8	2	7
Daily Level of Drug Use	1	2	2	0
Weekly Level of Drug Use	1	3	6	5
Monthly Level of Drug Use	2	0	2	2
Less Than Monthly Level of Drug Use	2	3	4	2

Table 2: Key							
Characteristics							
Among							
Selected							
Former MLB							
Players							
Player	Role	Years	When Drug Use	Family	Treatment	Career Effects	Post Career
		in MLB	Began	Effects Yes/No	in career Yes/No		Effects
Α	Pitcher	12	Prior to Professional Baseball	Yes	No	Negative – Decision making and preparing for game	Negative – Financial and relationship
В	Pitcher	13	During Major League Baseball Experience, with exception of the Last Two Years	No	No	Negative – Psychological – affected thinking	No
С	Pitcher	26	Non-user	No	No	No	No
D	Pitcher	19	During Minor	Yes	No	Amphetamines	No
			League Baseball Experience			enhanced mental awareness	
Ε	Position Player	11	Prior to Professional Baseball	No	No	None reported	No
F	Position Player	17	During Major League Baseball Experience, with exception of the Last Two Years	No	No	None reported	No
G	Position	11	During Major	No	Yes - forced	Negative – Led to	Yes – Until
	Player		League Baseball Experience, with exception of the Last Two Years		to clean up	demise	gainful employment
н	Pitcher	13	During Major	Yes	No	Negative – Performed	No
_			League Baseball Experience, with exception of the Last Two Years			better when calm & relaxed	
Ι	Position Player	11	Prior to Professional Baseball	Yes	No	Amphetamines enhanced mental awareness	No
J	Position	12	During Major	No	No	None Reported	No
	Player		League Baseball Experience, with exception of the Last Two Years				
K	Pitcher	11	Prior to Professional Baseball	Yes	Yes	Negative – Affected performance level - stats	Yes – Financial, legal and relationships
L	Position Player	16	During Major League Baseball Experience, with exception of the Last Two Years	No	No	Negative – Anger/rage thrown out of game	No
М	Position Player	14	Non-user	No	No	No	No
Ν	Pitcher	14	Prior to Professional Baseball	Yes	No	Affected performance level - stats	No
0	Pitcher	17	During Minor League Baseball Experience	Yes	Yes	Negative – Affected performance level - stats	Yes – Financial, legal and relationships
Р	Pitcher	11	Prior to Professional Baseball	Yes	Yes	Terminated MLB Career	Yes