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HOW PARENTS OF TEENS STORE AND MONITOR PRESCRIPTION DRUGS IN THE HOME*

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Abstract

Qualitative interviews were conducted with parents of teens to explore how parents store and monitor prescription drugs in the home. Most parents had prescription drugs in the house, but took few precautions against teens accessing these drugs. Strategies for monitoring included moving the drugs to different locations, remembering how many pills were left, and how medication containers were positioned. Reasons given for not securing drugs were that parents did not think that their teens would be interested in their prescription drugs and did not believe that they could be used to get high. This study highlights the need for parents to be educated about securing prescription drugs, the dangers of non-medical prescription drug use by teens, and which drugs might be used for non-medical purposes.

INTRODUCTION

Non-medical prescription drug use among teens is on the rise and prevalence of non-medical prescription drug use is greater than all illicit drugs, other than marijuana (Johnston, O'Malley, Bachman, & Schulenberg, 2010). In 2012, prevalence of any non-medical prescription drug use in the past year among 12th graders was 15% and lifetime prevalence was 21% (Johnston, O'Malley, Bachman, & Schulenberg, 2013). Amphetamines have annual prevalence rates of 8% for 12th graders. Depressants or tranquilizers and sedatives have annual prevalence rates of 5% for 12th graders (Johnston et al., 2013). Reasons for non-medical prescription drug use differ by type of drug, and drugs are often used for multiple reasons (Boyd, McCabe, Cranford, & Young, 2006; McCabe & Cranford, 2012). In addition to getting high, teens use tranquilizers to help with sleeping and affect regulation; stimulants to improve concentration and increase energy and alertness; and opioids for pain relief, relaxation, and affect regulation (McCabe & Cranford, 2012).

Non-medical prescription drug use can have significant negative consequences, including addiction and accidental overdose. Furthermore, these problems may be confounded by

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combining prescription drugs with other substances, including alcohol. Studies have found that teens who use prescription drugs for non-medical purposes are significantly more likely to report using illicit drugs and alcohol than are other teens (Boyd et al., 2006; McCabe, Boyd, & Young, 2007). About 70% of high school seniors who use prescription drugs for non-medical purposes report co-ingesting other drugs or alcohol (McCabe, West, Teter, & Boyd, 2012).

Monitoring the Future survey data indicate that a considerable number of teens report easy access to prescription drugs (Johnston et al., 2013). In 2012, 13% of 8th graders, 27% of 10th graders, and 45% of 12th graders reported that amphetamines were fairly easy or very easy to get. Access to sedatives and tranquilizers was perceived to be somewhat more difficult, with 11% of 8th graders, 20% of 10th graders, and 29% of 12th graders reporting fairly easy or very easy access to sedatives, and 11% of 8th graders, 20% of 10th graders, and 15% of 12th graders reporting fairly easy or very easy access to tranquilizers. One youth survey found that 56% of teens agreed that prescription drugs are easier to obtain than illicit drugs and that they can be easily obtained from home (Partnership Attitude Tracking Survey, 2009). A study of teens' use of prescription pain medication found that 34% reported getting the drugs from a family member, 17% from a friend, and 14% from a dealer or through theft (Boyd, McCabe, & Teter, 2006).

Even though teens may access prescription drugs with relative ease at home, little is known about how parents store and monitor prescription drugs in the home. One study that focused on Hispanic parents of young children found that less acculturated parents were more likely to store medicines improperly, which can result in accidental poisoning (Crosslin, Tsai, Romo, & Tsai, 2011). However, this study focused on parents of young children who may be at risk of accidentally ingesting prescription drugs, but are unlikely to intentionally use them. Few or no studies have investigated how parents of teens try to prevent their children from accessing prescription drugs in the home. Given the potential importance of access to prescription drugs in the home, we conducted qualitative interviews to explore how and where parents of teens store prescription drugs in the home and how they monitor them.

METHOD

The present study is based on data collected from qualitative interviews conducted with parents of teens. However, the interviews were part of a larger study that also included qualitative interviews with teens and a longitudinal survey study of teens living in 50 mid-sized California cities (populations between 50,000 and 500,000). For the qualitative study, teens, ages 15-18, living in Northern California, and one of their parents/caregivers were recruited to participate. The teens were selected because they had reported drinking alcohol on at least four occasions within the past 12 months in the survey study. A letter was sent to parents of the selected teens informing them about the qualitative study and letting them know that they and their teen would be contacted and invited to participate in an interview about alcohol and drugs. Within 1 week of sending the letter, parents were contacted by telephone and asked for their permission to conduct a 1-hour in-person interview with their son or daughter. Verbal consent from parents was obtained prior to speaking with the teen. Then the teen was asked about their interest in participating in the study, and if interested,

the teen provided verbal assent. Teens were paid \$50 for their participation. After the teen agreed to participate, the parent was asked about his/her interest in participating in a face-to-face interview. One parent per household was interviewed, and the first available parent was selected. Parents were paid \$25 for their participation. Written consent from parents for the interview with the teen and their own interview and written assent from teens were obtained just prior to the interviews. All research protocols including recruitment procedures, consent forms, and interview protocols were approved by the IRB of the authors' institution.

The interviews were conducted in the respondents' home. An effort was made to interview the parent before interviewing the teen. The reason for doing so was that in some cases where the teen was interviewed before the parent, parents were more suspicious about the interview questions and wondered about the reasons for the questions. In particular, some parents wondered whether their teen had said something during their interview that prompted the interviewer's questions to the parents. In cases where a parent expressed such concerns, the parent's fears were allayed by assuring him/her that the same interview protocol and questions were used for all parents and teens.

Semi-structured interviews were conducted with parents about the availability and monitoring of alcohol and prescription drugs in the home, although this article will focus on prescription drugs only. Semi-structured interviews were used because they provide the flexibility of open-ended questions but allow the researcher to focus on a narrowly defined topic, in this case the storing and monitoring of prescription drugs. Furthermore, exploratory, semi-structured interviews allow for the development of new hypotheses in developing research areas.

In total, 44 caregivers (31 mothers/female guardians, 13 fathers/male guardians) were interviewed out of 60 households that were contacted, resulting in a response rate of 73%. After four pilot interviews, the decision was made to add questions about the availability and monitoring of prescription drugs to the interview protocol. Thus, 40 caregivers out of 44 were asked questions about prescription drugs. Forty interviews are enough for saturation to occur. Saturation, the point at which no new information or themes emerge from the data, is typically achieved after 12 interviews (Guest, Bunce, & Johnson, 2006).

Interviews with parents lasted an average of 50 minutes. Almost three-quarters (73%) of parents were White, 7% were African American, 5% Asian, and 16% other. Thirty-two percent reported being Hispanic. Two-thirds (67%) of families who participated had female caregivers who had completed college or higher.

Parents were told that some teens take prescription medications to get high, to relax, or to help with studying. Parents were then asked to describe the availability of prescription drugs in their home that could be used by teens for those purposes (Do you have any medicines in your home that your kids could use for those kinds of purposes?), how the drugs were stored and monitored (How/where are the drugs stored?), how parents prevented teens from taking prescription drugs without asking, and if there had been any instances when their teens had taken drugs without asking (Have you ever been concerned that one of your children might be tempted to use these medications? (If yes) Why do you think that? Has this concern

changed the way that you store or keep track of your medications? How so? Would you notice if one or two pills were missing?) Parents were not provided with a list of drugs and were not advised on which drugs teens may use for non-medical purposes.

Interviews were conducted by four trained interviewers (two male and two female), though one interviewer conducted most of the interviews. All interviewers had at least a Master's degree in a qualitative research field. Interviewers participated in an all-day training to introduce them to the study methodology, research questions, and techniques used to discuss sensitive issues with respondents. In addition, interviewers completed human subjects training. All interviews were recorded, transcribed verbatim, and imported into ATLAS.ti (Muhr, 2009). A priori themes were included on the basis of the study's initial literature review. However, consistent with a grounded theory approach, extensive discussions took place among the coders when novel or unanticipated themes emerged. These discussions led to additional codes that were refined iteratively during the coding process. Interviews were coded by one coder and every fifth interview was double-coded to ensure consistency. A sorting process of selected codes, such as "*drugs*," "*monitoring*," and "*storage*" took place to analyze data and to identify emerging themes.

For the purpose of this study, the term *non-medical prescription drug use* was used, rather than *abuse*. The term *non-medical prescription drug use* is used by the National Survey of Drugs Use and Health and is defined as "use of prescription drugs that were not prescribed to the respondent or use of these drugs only for the experience or feeling they caused" (Substance Abuse and Mental Health Services Administration, 2011). It is important to note that non-medical use may not meet DSM-IV criteria for substance abuse disorder, whereas abuse is defined as meeting DSM-IV criteria (Zacny, Bigelow, Compton, Foley, Iguchi, & Sannerud, 2003). The prescription drugs mentioned by parents were categorized into three broad categories: pain relievers/opioids/narcotics (e.g., Vicodin, Oxycontin), depressants/tranquilizers/sedatives (e.g., Valium, Xanax), and stimulants/amphetamines (e.g., Ritalin, Adderall). Brief quotations illustrative of prominent and recurring themes were identified.

RESULTS

Prescription Drugs in the Home

Out of the 40 parents interviewed about prescription drugs, 31 reported keeping at least one prescription drug in the home that, according to the respondents, could be used by teens for non-medical purposes. Fourteen parents had pain relievers, and seven had depressants. Six out of 31 parents had a combination of prescription drugs. Of the six, four parents had pain relievers and depressants and two parents had pain relievers and stimulants. Four parents refused to disclose the type of prescription drugs they kept in the home. The mother of a 17-year-old boy described the large number of prescription drugs in their home:

When I look around the house, I laugh because I think if [my son] really wanted to get out of control ... I mean we have more than enough different drugs of varying kinds. Opiates, barbiturates. I mean we've got it, it's everywhere. I was looking around the house going, "Oh, dear." And you know, I had a number of medical

things happen to me and I have all of the drugs left over from all of that, and it's everywhere. So, if [my son] wanted to, he could do quite a lot. [Laughs].

Nine parents reported that they had no prescription drugs in the home that could be used for non-medical purposes. One parent explained the absence of prescription drugs:

We have no pills in the house. I mean not even Tylenol when you have a headache. [...] We know a lot of people and family members that are addicted to painkillers or pills.

Storage of Prescription Drugs

Out of the 31 parents who had prescription drugs that could be used for non-medical purposes, only one respondent reported locking up her medications in a drawer in her bedroom. Another parent's solution was to discard unused medications because she was afraid that someone might mistakenly use it:

Most of the time, I tend to take prescriptions that we don't finish and flush them down the toilet or throw them away, just because I don't even want one of us to think we're taking one thing and take something else.

In most homes, however, medications were stored in parents' bedrooms, usually in a dresser drawer, in medicine cabinets in bathrooms, or in drawers or cupboards in kitchens. Some parents took no special precautions in storing prescription drugs. This is exemplified in the next quote from the father of a 16-year-old girl who said that his prescription drugs were "certainly not any more hidden than the beer in the garage." Some parents believed that hiding prescription medications, moving them to a less accessible location, or frequently changing the location where drugs were kept were ways of keeping drugs out of their teen's reach. The mother of a 17-year-old discussed her method of ensuring that her son was unable to find pain relievers such as Vicodin and morphine, which she frequently had in the home:

[M]aking sure that I knew where it was, putting it in a different place so it didn't stay in the same place all the time, so it wasn't always just in the cupboard, coz I didn't have any locked cupboards or anything, but I would just put it someplace else where it wasn't in my drawer, so it wasn't as obvious where it was and I never kept it in the same place for long so that if he did find something, he couldn't go back to it again coz it wouldn't be there anymore.

Some parents moved prescription drugs from easily accessible locations, such as the medicine cabinet in the bathroom to locations they felt would be easier to monitor, such as a drawer in the parent's bedroom. This was explained by the mother of a 16 year old, though her primary concern was about her son's friends taking the drugs:

I thought that it's better to keep prescription medication out of the public bathroom in case other kids come over, and I've removed it from our common bathroom and put it in my drawers.

The most common reasons given by parents for not being concerned about the availability of prescription medication in the home were that their teen would not be interested in

prescription drugs and that the drugs available in the household would not have the desired effect of getting the teen high. A parent of a 16-year-old daughter stated how easy it was to find prescription drugs in the home, suggesting a lack of interest on the part of his teenager to seek them out: “Yeah, if they were really looking for it [prescription drugs] they could find it.” Another parent disclosed that she had no concern about her 17-year-old daughter taking her prescription medications, even though she mentioned that she was under a “pain contract,” which is used by some physicians to monitor use of potentially addictive prescription drugs. She explains: “No, I don’t have a concern about it with her. I do take quite a few medications. [...] [R]ight now they are on top of my bed, but I keep them pretty much in check.” A father of a 16-year-old girl who reported having painkillers stated this about monitoring his prescribed medication: “In fact, it’s not like I count them It’s not terribly rugged stuff. It’s stuff that takes three or four days [to take effect]. It has a long uptake.” Even a parent who suspected that her 17-year-old son was taking her prescription medications because she noticed that she was running out of prescription drugs sooner than expected, confronted her son by pointing out to him that the drugs would not have any effect: “I was like, ‘dude, this stuff won’t do you any good. It’s not gonna bring you up or down.’”

Another reason for not being concerned about the availability of prescription drugs in the home was that the drugs were expired and therefore would have no effect. One parent explained: “Expired drugs won’t do anything. We have Vicodin but I’m sure it’s expired so that wouldn’t even do anything.” This sentiment was echoed by another parent who said: “It’s not going to do anything in your body if it’s expired, so what the heck.” Another reason mentioned was that their children do not like to swallow pills or take medication. For example, one mother said: “we are not a pilling taking family at all. No one here likes taking even cold medication.” Some parents also expressed the belief that they would know if their teen took prescription drugs. One mother explained: “I could tell if my children were taking the medication or a drug. I could tell as a mom.”

Monitoring Prescription Drugs in the Home

Monitoring of prescription medications took several different forms, including dispensing prescription medication to teens as needed, having a sense of how much medication is remaining, memorizing how medication bottles were positioned, and counting pills. Some parents felt that distributing prescription drugs when their teen had a legitimate medical need meant that the teen would be unable to take more medication than what was needed and that it could be easily monitored. For instance, one mother explained that she would always dispense sleep medication to her son on an as needed basis in order to minimize the risk of abuse.

Parents often relied on their memory of how much medication was remaining. The parent of a 16-year-old girl admitted:

I don’t have a way of keeping track. I wouldn’t know if one or two were missing, but I’d notice if there were three [missing]. I never really thought of it as a concern.

Some parents reported monitoring prescription drugs by noticing arrangement of medications in the medicine cabinet or keeping an eye on the amount of pills remaining. For example, the mother of a 17-year-old boy explained:

No, it's not locked up but I monitor how I have it in the medicine chest so I know how my bottles are arranged. And I do check that.

A parent of a 17-year-old girl reported her husband's monitoring:

He counts his pills. [...] he just knows he has to take it in the morning and how many. But he'll know if something's missing, believe me, he knows. He knows how many in a bottle and he keeps track of what he takes [with] [t]hose little pill boxes.

Several parents who admitted that they do not take special care in storing or monitoring prescription drugs, mentioned that it had occurred to them to do so, but that they never got around to doing anything about it. When asked about whether he was concerned about his teen taking his prescription drugs, one father answered: "I've thought about it a few times, but, of course, I never did anything about it." The mother of a teen, when asked whether she monitors her medicine said: "I always think I should but I just don't."

How Parents Have Caught Teens Taking Prescription Drugs

Some parents discovered that their teens were taking prescription drugs from home. For example, one 17-year-old was caught by his parents after they discovered that some of their pain relievers were missing:

We had caught him stealing Vicodin from us. Just so happened my wife had counted a bottle of pills and then a day later most of them were gone, or a lot of them were gone. And then we caught a text message where he was apparently going to share some morphine with a classmate between first and second period.

One parent reported finding empty bottles of prescription cough syrup; and another parent noticed that the cough syrup bottle was very messy after her son had taken some:

It's kind of sticky around; it's a really sticky liquid cough medicine. It wasn't put together all nice or wiped down.

A parent of a 17-year-old boy explained why she was not apprehensive about leaving prescription drugs in the bathroom until an issue arose:

I never thought it was an issue with medication to just keep it in my bathroom, in my cupboard, no big deal, coz they don't go in there, but I was suspicious of my son at one point. It seemed like I ran out of medicine a little too quickly quite often.

Differences between Male and Female Caregivers

There were no apparent differences in how male and female caregivers monitored or stored prescription drugs. Neither did they differ in their concern about teens taking prescription drugs from home without permission. Parents, male and female, expressed awareness of their partner's medication in the home, including storage and monitoring strategies. This awareness may be in part the result of sharing medications. For example, a number of

respondents indicated that they have prescription drugs, such as pain killers and sleep medications, in the household that they are using for any family members, as needed.

DISCUSSION AND CONCLUSIONS

Prescription drugs were common in the homes of the parents of teenagers who were interviewed for this study. Most of the parents had prescription drugs but took few precautions against teens accessing these prescription drugs. For the most part, prescription drugs were kept unlocked and easily accessible. Strategies used for monitoring included moving the drugs to different locations, remembering how many pills were left in a bottle, and remembering how medication containers were positioned. The parents stored and monitored prescription drugs in a manner similar to how they stored and monitored alcohol in the home, with few of them taking serious precautions to prevent teens from accessing them (Frieze, Grube, & Moore, 2012). The primary reasons given for not securing prescription drugs were that most parents did not think that their teens would be interested in their prescription drugs or did not believe that their prescription drugs could be used by their teen to get high. Other studies have found support for the idea that parents do not view prescription drugs as dangerous. For example, one study found that about 25% of parents feel that prescription drugs are safer than street drugs and parents are much less likely to talk to their children about the dangers of prescription drug abuse than they are to talk to them about illicit drugs like marijuana, heroin, or cocaine (Partnership Attitude Tracking Survey, 2007).

There are several limitations to the study. Most importantly, the parents interviewed are not a representative sample and their experiences may not be typical of experiences of other parents. For example, parents were selected for the study because their teen had reported drinking alcohol in a separate youth survey. As a result, it is unclear how pervasive unsecured prescription drugs in the home are or how most parents monitor them. In addition, because parents were prompted at the beginning of the interview that teens may take prescription drugs for non-medical purposes, we did not explore whether they knew about this possibility. Likewise, parents were not provided with a list of prescription drugs that teens might misuse. As a result, parents may not have reported prescription drugs where they were unaware of the potential for abuse or, conversely, may have reported on drugs with little or no potential for abuse. Also, this study only dealt with prescription drugs, not drugs that are available over the counter (OTC). OTC drugs, such as OTC cough and cold medicines, have an annual prevalence rate of 3%, 5%, and 6% for grades 8, 10, and 12, respectively (Johnston et al., 2013). It is also important to note that home is not the only place where teens can access prescription drugs. Even though family members are a common source of prescription drugs, teens can also access prescription drugs through friends, peers, and strangers. For example, 46% of 12th graders who engaged in non-medical prescription drug use in the past year purchased prescription drugs from a friend and 22% purchased them from a drug dealer or stranger (Johnston, O'Malley, Bachman, & Schulenberg, 2011). Despite these limitations, this study is important because it provides in-depth information about how parents of teens store prescription drugs in the home and the ways in which they attempt to monitor them. Future research should explore these issues quantitatively with a representative sample.

The primary implication of this study is that parents should be educated about the need to secure and monitor prescription drugs in a systematic manner. Parents also need to be made aware of the prevalence of non-medical prescription drug use among teens and of the fact that many teens obtain prescription drugs by taking them without permission from parents and other relatives. Furthermore, parents should be made aware that in addition to getting high, teens may have additional motives for using prescription drugs. These motives can include relaxation, affect regulation, pain relief, and enhancing energy (McCabe & Cranford, 2012). Parents should be encouraged to securely store prescription drugs to limit access to them. Keeping prescription drugs inaccessible to teens may also send a message that non-medical use of prescription drugs is not acceptable.

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