

Social Networking and Benzodiazepine Withdrawal: The Realities of Dependence and the Necessity of Support

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Thank you

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Note: This survey was reviewed and approved by the Institutional Review Board at Saint Mary's College.

A Forgotten Group?

When individuals have difficulty with anxiety, what is the most typical response?

Often they approach their family doctor, who attempts to treat the anxiety or refers them to a psychiatrist. In either case, it is very likely that a medical (psychopharmacological) solution may be offered.

The solution offered is often benzodiazepines. The United States has the highest rate of benzodiazepine prescription in the world (Rivas-Vazquez, 2003).

If the person is prescribed benzodiazepines, short term relief is obtained, but tolerance develops and increasing dosages may be required. Dependence on benzodiazepines is very likely, and how do we help individuals facing benzodiazepine dependence? The truth is we don't.

And this is the reason that Social Networking is important to them.

Common Benzodiazepines

<u>Trade Name</u>	<u>Generic Name</u>
Xanax	Alprazolam
Klonopin	Clonazepam
Valium	Diazepam
Ativan	Lorazepam
Halcion	Triazolam
Librium	Clordiazepoxide
Restoril	Temazepam
Tranxene	Clorazepate



Let's begin with some background information about these medications...

Common Uses of Benzodiazepines

- Most frequently prescribed medication for anxiety disorders, including Generalized Anxiety Disorder
- Most commonly used medication for treatment of Panic Disorder (Pull & Damsa, 2008)
- Most common use by primary care practitioners is in treatment of insomnia
- College students' use is rising (Kleykamp et al., 2010)
- Often administered along with an antidepressant in initial stage of treatment for depression
- Used for anticonvulsant effect in seizure disorders
- Prescribed to promote muscle relaxation
- Prescribed to reduce agitation often associated with psychotic disorders

Mechanism of Action of Benzodiazepines

Benzodiazepines modulate activity of gamma-aminobutyric acid, a neurotransmitter also known as GABA.

They bind to GABA receptors and increase the receptors' affinity for GABA by making the receptor site more sensitive to being activated. (A process known as positive allosteric modulation.)

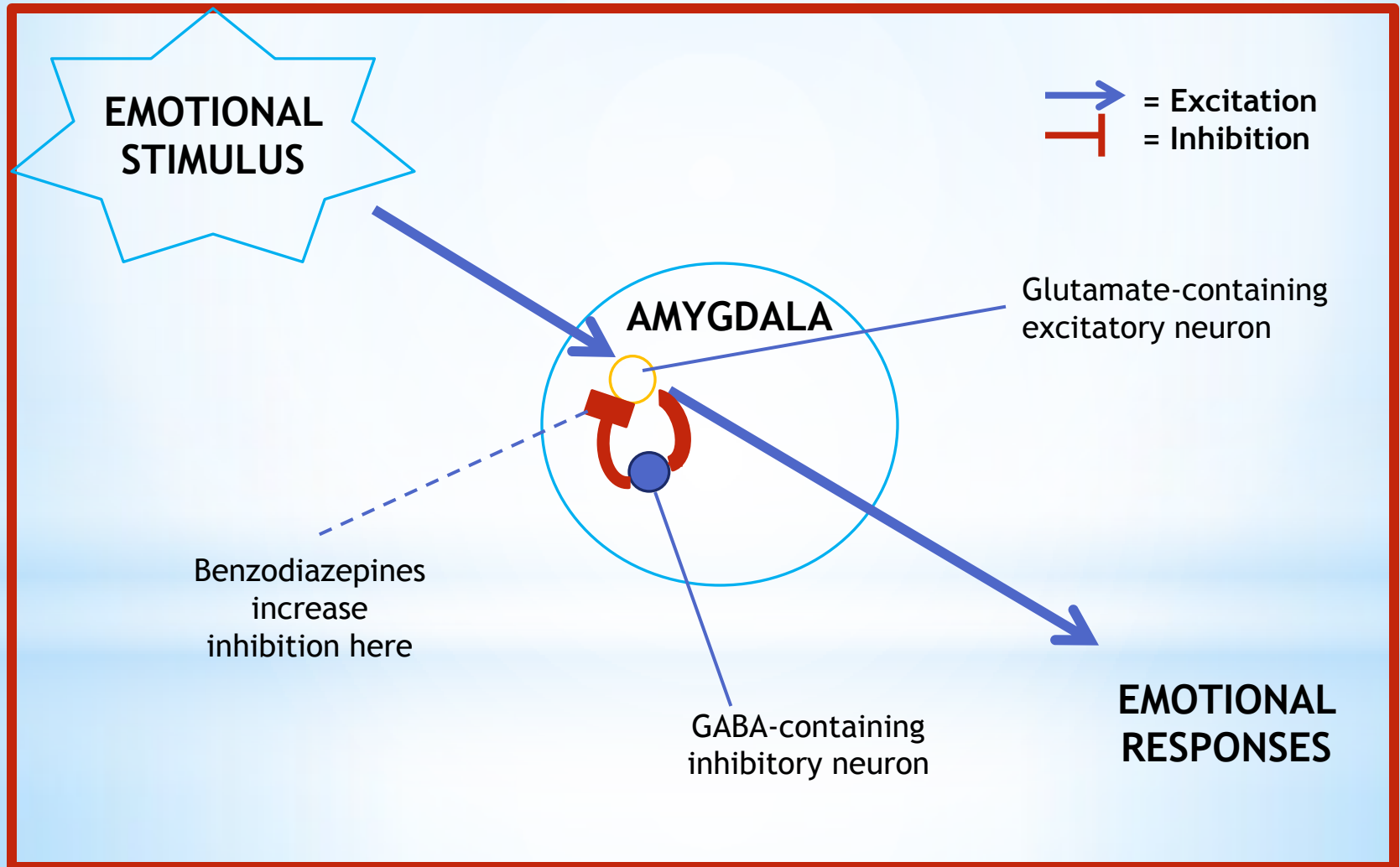
A similar process occurs with ethanol, the active ingredient in alcohol, but ethanol can facilitate GABA receptor activity in the absence of GABA, whereas benzodiazepines require GABA.

GABA is widely used throughout the CNS, and a specific type of GABA receptor, the GABA_A receptor, is the primary inhibitory receptor in the brain.

GABA_A is involved in the regulation of fear, anxiety, muscle tension, and memory functions.

Benzodiazepine provides a “GABA boost,” facilitating inhibition

Benzodiazepine's Inhibitory Effect



Neural Effects of Benzodiazepines

Quickly absorbed in gastrointestinal tract, have good lipid solubility to cross blood-brain barrier, and reach peak levels in 30 minutes

Increased GABA transmission in limbic system

→ reduced fear, anxiety

Increased GABA transmission in hippocampus

→ memory impairment

Increased GABA transmission in cerebellum

→ motor dyscoordination

Chronic administration alters the GABA_A receptor complex, resulting in decreased sensitivity, requiring increased dosages

(Rivas-Vazquez, 2003)

Beneficial Effects of Benzodiazepines

- Quickly absorbed; some achieve peak levels within 30 minutes
 - Physicians and patients are pleased with short term results
 - Quick and effective relief from anxiety, emotional distress
 - Quick reduction of muscle tension and agitation
- Have anticonvulsant effect for seizure disorders
- Reduce anxiety often experienced in first weeks of antidepressant use (Furukawa, Streiner, & Young, 2001)
- Can be an effective sleep aid. Meta-analysis revealed decrease in time to fall asleep is about 4 minutes, and increased sleep time is approximately one hour (Holbrook, Crowther, Lotter, Cheng, & King, 2000).
- These medications are inexpensive because they are off patent

Detrimental Effects of Benzodiazepines

- Side effects: sedation, daytime drowsiness, ataxia, dyscoordination, slurred speech, decreased attention, and impaired memory and cognitive performance
- Relapse rates of 50% or higher are typical for most disorders when meds are discontinued (Spiegel & Bruce, 1997)
- Physiological dependence can occur as soon as 4-6 weeks, even in cases where a person is taking the prescribed therapeutic dosage (Spiegel & Bruce, 1997)
- Tolerance occurs and increased dosage is required with prolonged use
- Dependence and withdrawal effects occur with prolonged use
- Continued use impairs cognitive performance (Bierman et al., 2007), especially as duration of use continues
- Side effects are especially of concern in elderly population

Effect of Benzodiazepines on Treatment

Psychopharmacological Treatment:

- Using benzodiazepines when initiating antidepressant treatment reduces treatment dropout rate (Furukawa, Streiner, & Young, 2001)

Psychotherapeutic Treatment:

- Interference with exposure-based treatments has been shown in rats (Bouton, Kenney, & Rosengard, 1990) and humans (Marks et al., 1993)
- Interference with memory for psychoeducational material in cognitive treatments (Westra, Stewart, Teehan, Johl, Dozois, & Hill, 2004)
- Combination treatments often result in poor post-treatment outcomes, when meds are discontinued and symptoms return (Spiegel & Bruce, 1997)

Discussion

1. What benzodiazepines are you familiar with in your experience, practice, or research?
2. What have the benzodiazepines been prescribed and/or used for?
3. What have been the effects of benzodiazepines, both positive and negative, of which you are aware?
4. How many of you are aware of individuals who rely on benzodiazepines as part of treatment?



Accidental Addicts:

Effects of Continued Benzodiazepine Use

- Prescribing of benzodiazepines continues to be extensive (Greenblatt, Harmatz, & Shader, 2011) both among general practitioners and psychiatrists.
- While the short-term effects of benzodiazepines are often seen as beneficial by patients and those who prescribe them, too often short term use results in longer term or daily use.
- Because physiological dependence can occur within 4-6 weeks, those who are prescribed benzodiazepines for any longer than one month are at risk to become dependent.
- Once a person realizes that he or she is dependent on benzodiazepines, there are few resources available.

Negotiating the Withdrawal Process

- If an individual wants to discontinue benzodiazepines, it must be done with caution.
- Withdrawal effects can include anxiety, apprehension, insomnia, tachycardia, agitation, muscle tension, tremor, hyperreflexia, sweating, seizures, extreme fevers, and even death (Spiegel & Bruce, 1997).
- Much of the information on benzodiazepine withdrawal comes from UK, including pioneering work done by Professor C. Heather Ashton DM, FRCP, Emeritus Professor from the Institute of Neuroscience, Newcastle University. See Ashton (2005).



Accidental Addicts: What are their Options?

- Few physicians or psychiatrists recognize symptoms of benzodiazepine tolerance.
 - They often mimic symptoms of anxiety disorders.
 - They comprise a cluster of divergent symptoms.
- Very few physicians or psychiatrists have the knowledge or experience to help a person successfully withdraw from benzodiazepines.
- Withdrawal can take an *extended* period of time that many physicians are not prepared for.
- Detox clinics are not suitable for the long period of time required. Rapid withdrawal requires adjunctive medications.

Consider:

"It is more difficult to withdraw people from benzodiazepines than it is from heroin. It just seems that the dependency is so ingrained and the withdrawal symptoms you get are so intolerable that people have a great deal of problem coming off. The other aspect is that with heroin, usually the withdrawal is over within a week or so. With benzodiazepines, a proportion of patients go on to long term withdrawal and they have very unpleasant symptoms for month after month, and I get letters from people saying you can go on for two years or more."

-Professor Malcolm H Lader, Royal Maudesley Hospital, *BBC Radio 4, Face The Facts*, March 16, 1999.

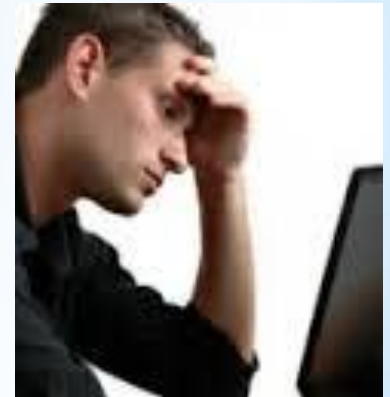
Introducing

BenzoBuddies

- BenzoBuddies (BB) is a internet forum founded in 2004 by a British man after his withdrawal from Rivotril (clonazepam or Klonopin), which he was originally prescribed to treat myoclonus, a non-epileptic seizure disorder.
- The mission of BB is to provide information and support for members who question their dependency on their medication and may want to plan and execute benzodiazepine withdrawal.
- The site is an online peer support group and no medical professionals are affiliated with the site in an advisory capacity, though some medical professionals are members.
- Members typically use screen names to remain anonymous.
- About 73% participate with gender undeclared, with 12% identified as male and 15% identified as female.
- BB currently has 10,949 members internationally. The members come primarily from the U.S. (72%), with 9% from Canada, 5% from the U.K., and about 3% from Australia. There are also members from Japan, Germany, France, India, Spain, etc.

What Can We Learn from BenzoBuddies?

1. How did they begin taking benzodiazepines?
 - What were they prescribed for?
 - Who prescribed them?
 - What were they told about them?
2. What have been the effects of benzodiazepines, both positive and negative?
3. What do they need to help them in the process of withdrawal?
4. What is the process of withdrawal like?
5. How long does withdrawal take?
6. What are they getting from the BenzoBuddies community that has motivated them to be members?
7. What do they want treatment professionals to know about benzodiazepine treatment and withdrawal?



Demographics of American Participants

Total Sub-sample = 493 *Note that this is a nonrandom sample, and should not be taken to represent all benzodiazepine users or all those who wish to discontinue benzodiazepines.

Of those who gave complete demographic information:

	13%	18-29 years
	18%	30-39 years
65% Female	19%	40-49 years
35% Male	32%	50-59 years
	15%	60-69 years
	3%	Over 70 years

They were prescribed benzodiazepines as early as age 11 and as late as age 86. Benzodiazepine use started as early as 1979 or before, and as late as 2012.

Those who reported ethnicity identified as Caucasian/White.



- Members of BenzoBuddies often feel they get the support they need from the BenzoBuddies site.
- Members describe themselves as “dependent” or “accidental addicts” because they feel they are addicted to benzodiazepines despite (or because of) following dosage regimens prescribed by their doctors.
- Many members report seeking online support via BB because the medical community failed to recognize or failed to offer treatment for their cluster of benzodiazepine withdrawal symptoms.
- We received numerous requests from them asking us to educate the treatment professional community.

Three Sub-Groups within BenzoBuddies

Benzodiazepine Only Group (n=308)

Individuals who have only been prescribed benzodiazepines

Benzodiazepine and Z Drug Group (n=185)

Individuals who have been prescribed both benzodiazepines and Z drugs

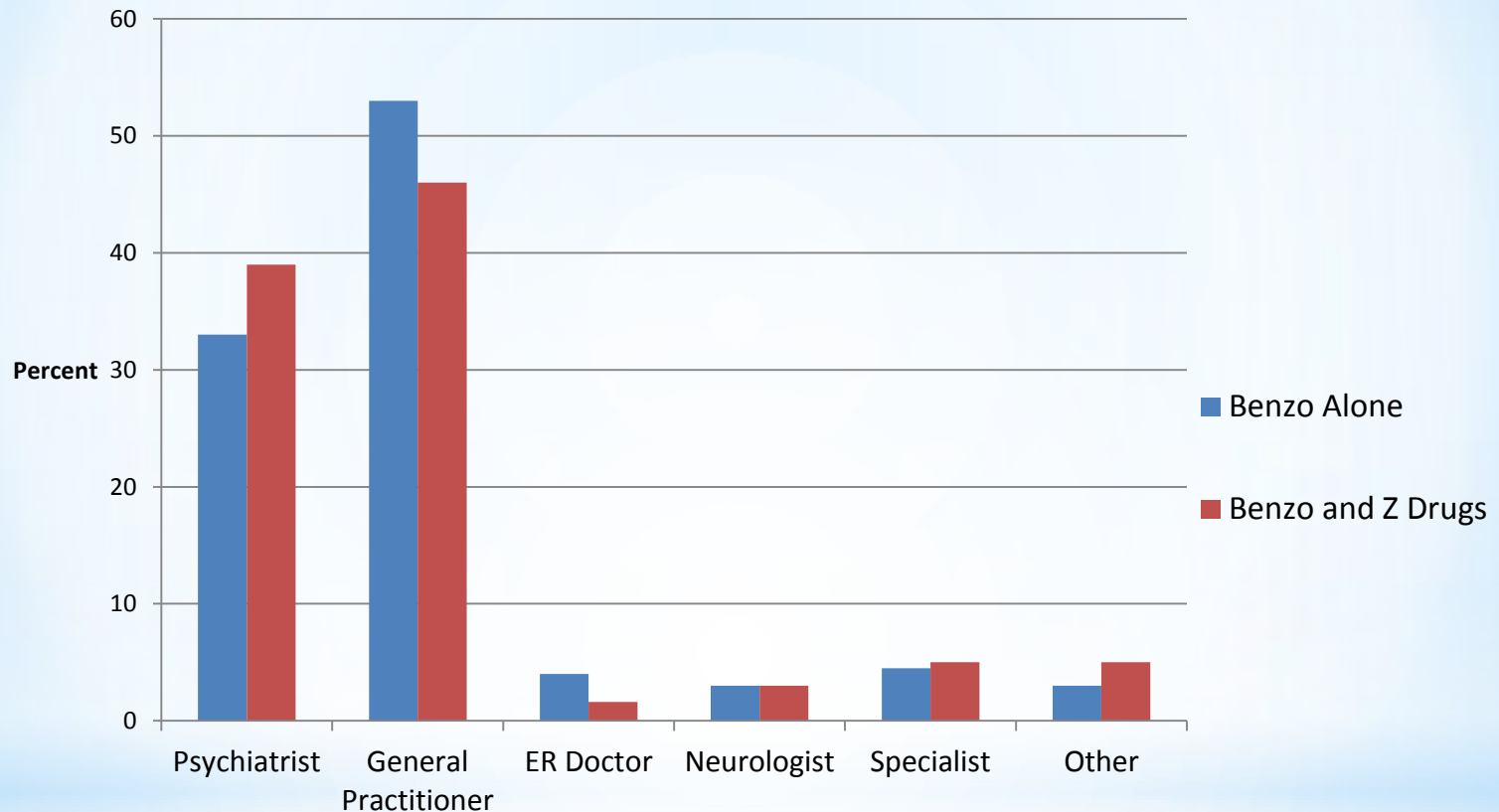
Z Drug Only Group (n = 11, not included in study.)

Individuals who have been prescribed only Z drugs

Z Drugs: Non-benzodiazepine drugs that have some properties of benzodiazepines. Have generic names often starting with Z. Typically used to treat insomnia.

Ambien - Zolpidem Sonata - Zaleplon Lunesta - Eszopiclone

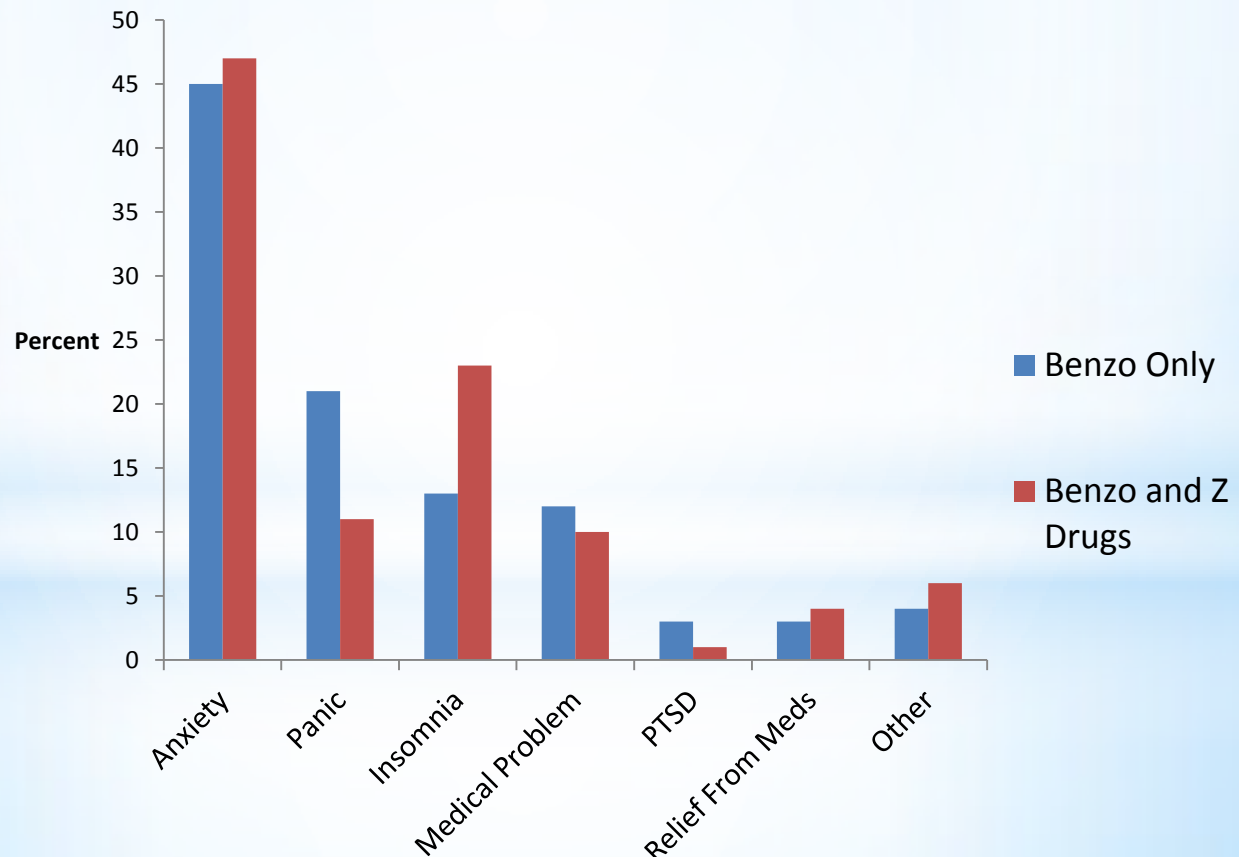
Who Originally Prescribed Medication?



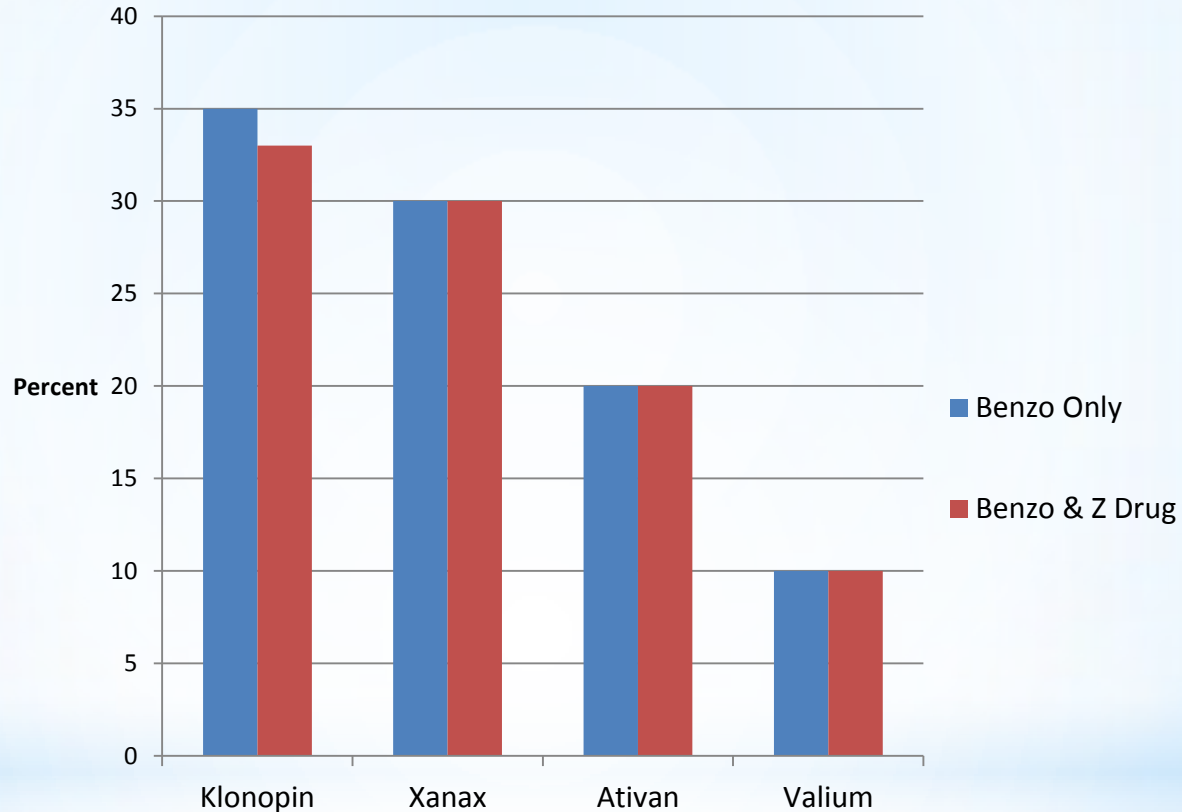
- Broken down into two groups to check for differences. No significant differences.
- Most frequent prescriber was General Practitioner, followed by Psychiatrist.

Examining the reasons that participants gave for benzodiazepines being prescribed, we found two significant differences: Panic was more likely to be a presenting problem in the Benzo Only Group, and Insomnia was more likely to be a problem in the Benzo and Z Drug Group.

Reason Benzodiazepines were First Prescribed



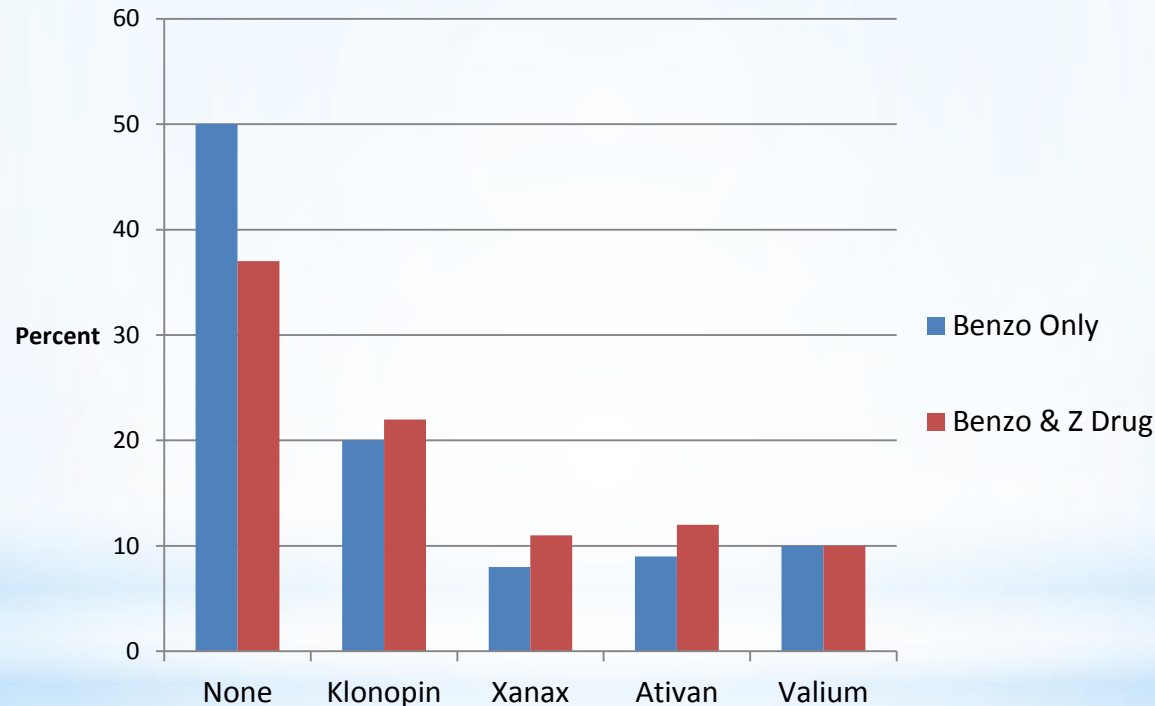
First Benzodiazepine Prescribed to Each Group



The benzodiazepines did not show differences between the two groups. These four medications account for 95% of meds in the sample.

When we examined the second medication prescribed, 45% did not have a second med prescribed, but over half did. Klonopin was the most likely second medication.

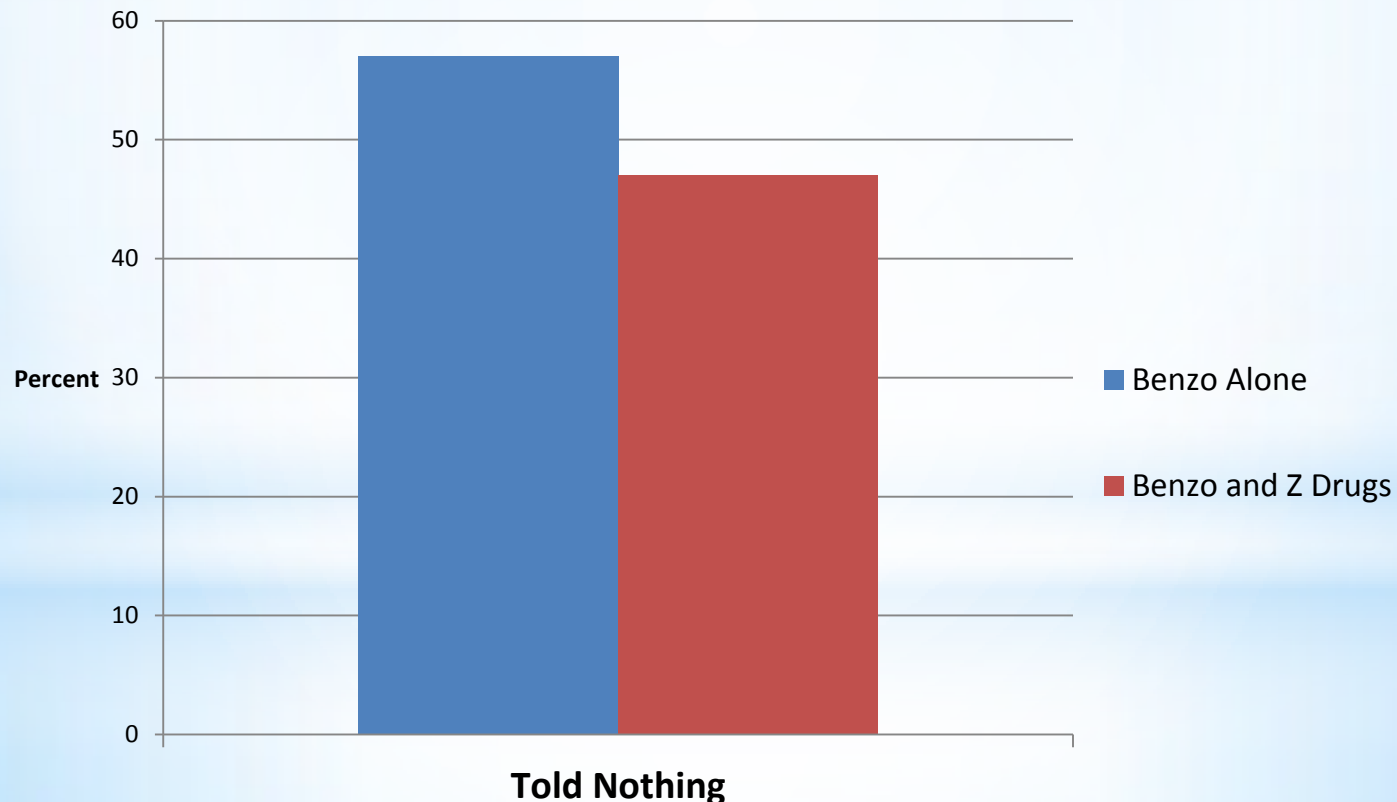
Second Benzodiazepine Prescribed in Both Groups



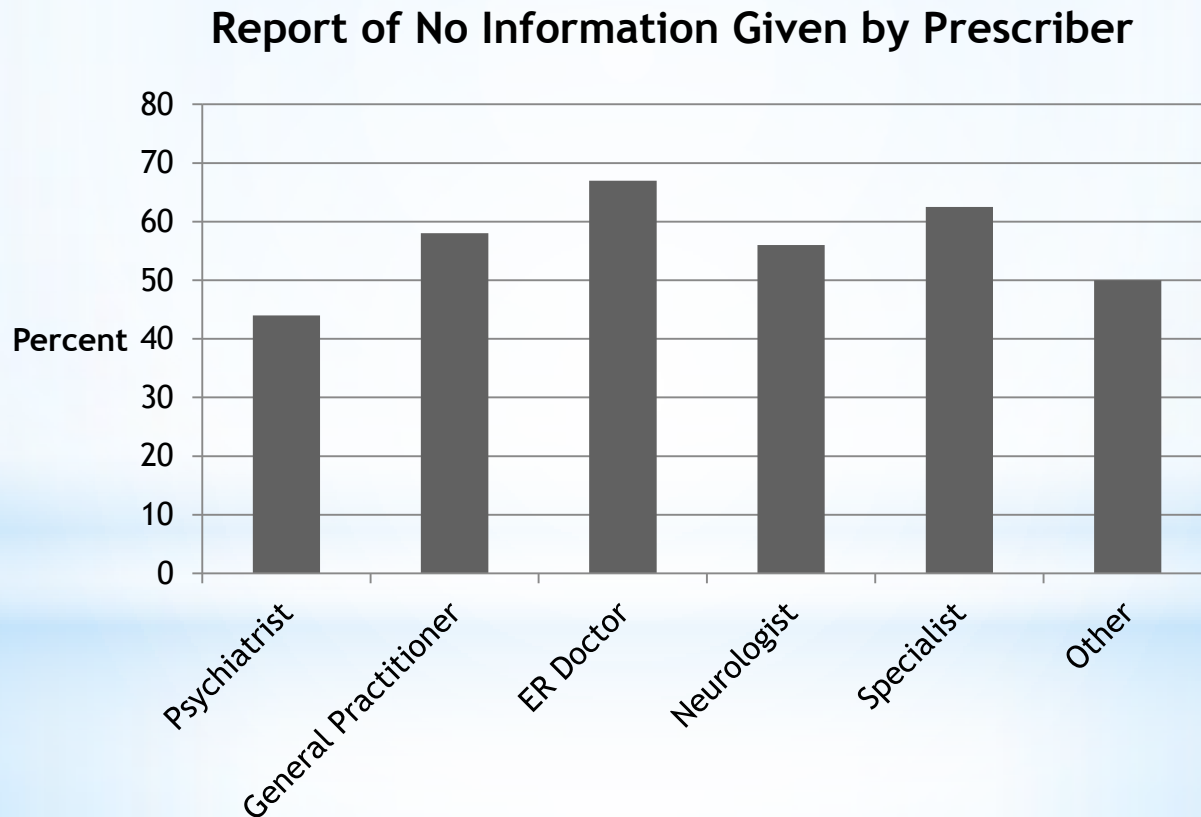
Prescriber did influence what was prescribed- Psychiatrists more likely to prescribe Klonopin; General Practitioners prescribe Xanax.

One of the biggest concerns that we had was the number of participants who reported that they had not been given any information about the effects of benzodiazepines by the prescriber. A significant difference between the groups was found.

Many Reported They Had Not Been Given Information about Effects of Medication

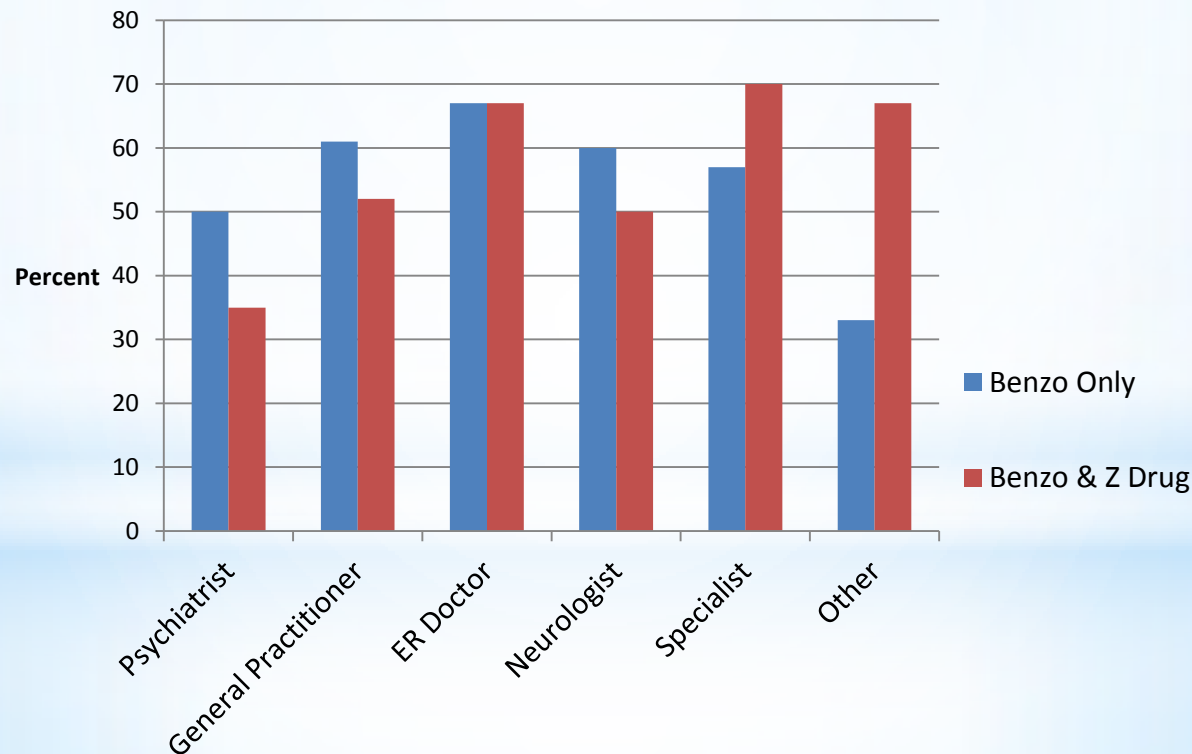


We examined what information participants reported and determined if it was related to the type of prescriber. Psychiatrists were least likely to provide no information, according to the participants' reports. But, if correct, all of these percentages are of concern.



When we broke the data down into the two groups, those in the Benzo and Z Drug Group who had their meds prescribed by a psychiatrist were significantly more likely to report receiving information than those in the Benzo Only group who saw a psychiatrist. We suspect this is related to prescribing meds for insomnia.

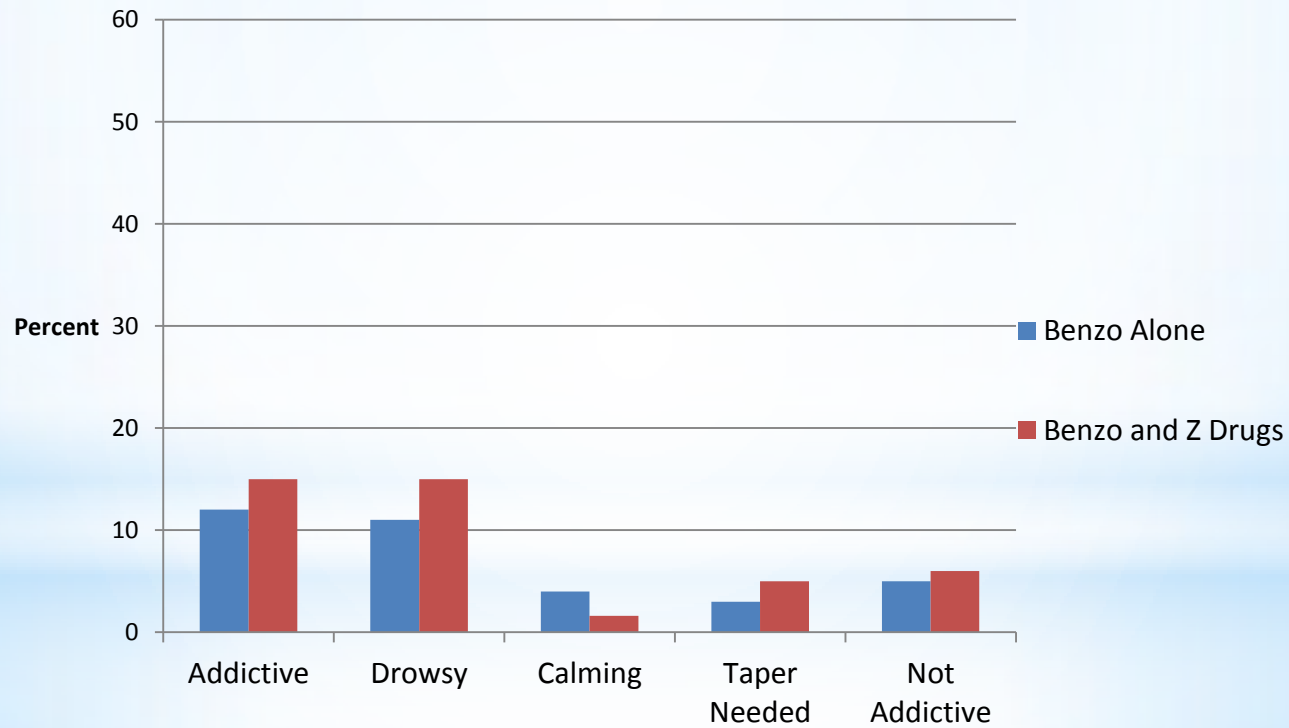
Report of No Information Given By Prescriber



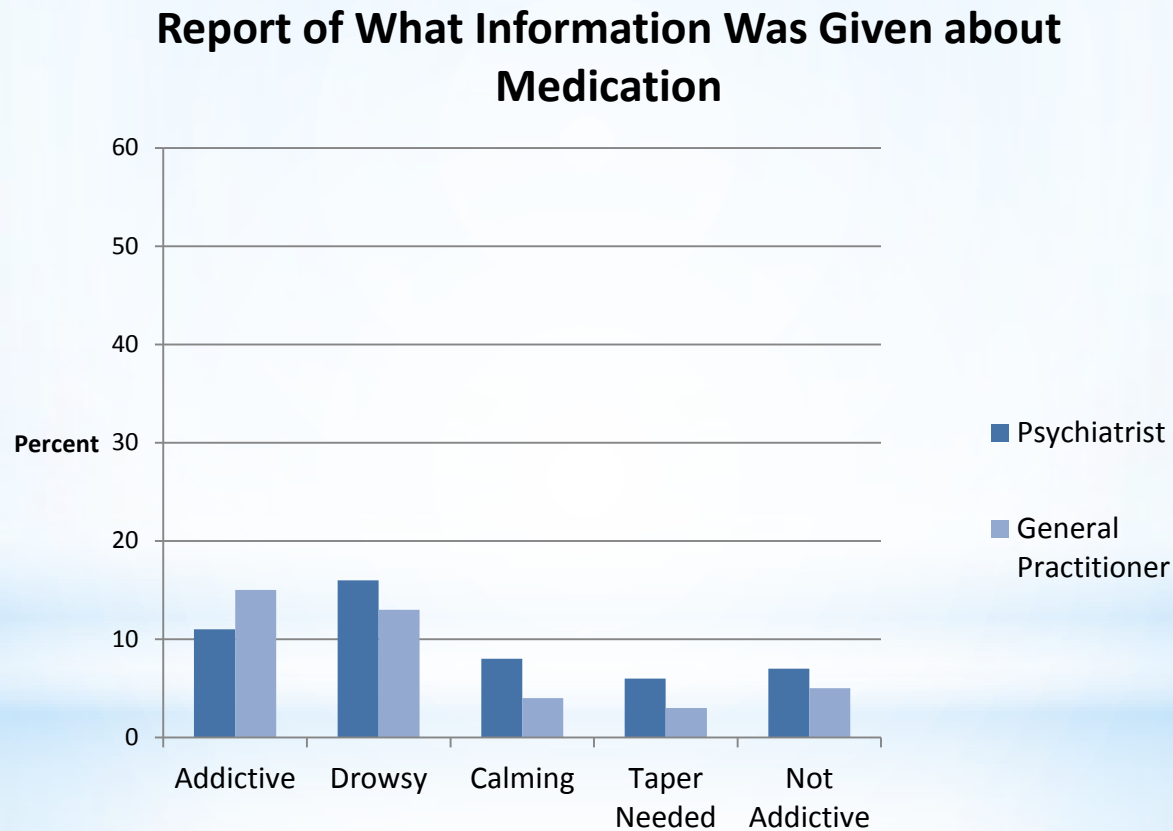
What **Were** Individuals Informed of?

It was similar across the two groups. No significant differences.

Report of What Information was Given about Medication



Comparison of reports of what Psychiatrists and General Practitioners informed their clients. Only significant difference was for “Taper Needed,” although in most cases Psychiatrists were reported to have provided more information.

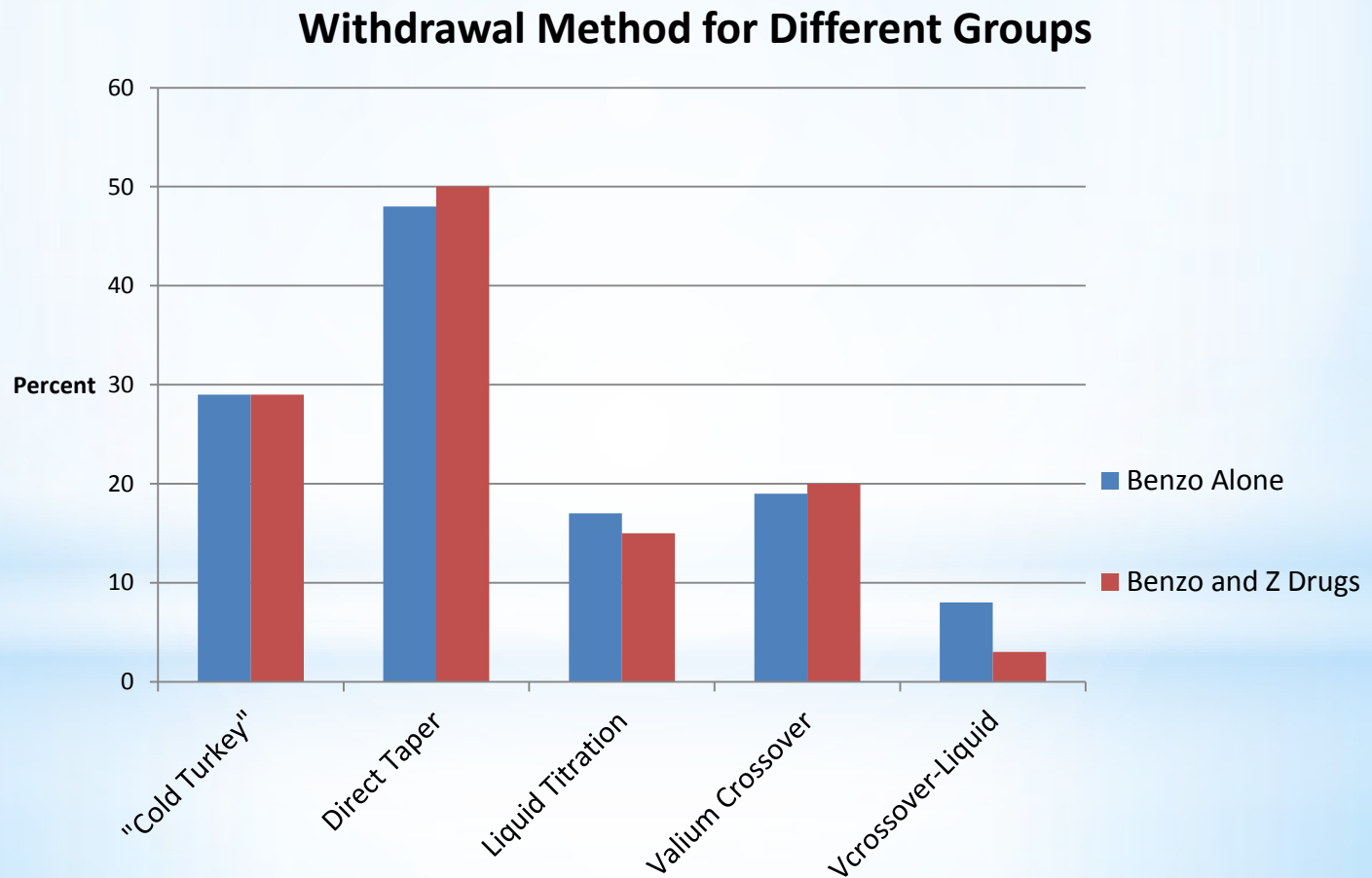


Discussion

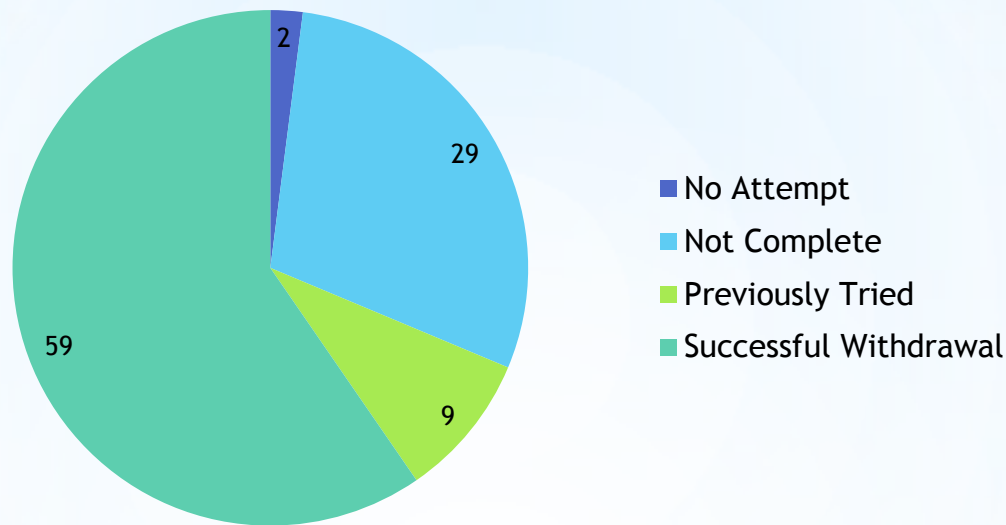
1. Do you see long term use of benzodiazepines in your clients?
2. What kind of information about benzodiazepines do you share with your clients?
3. What should a client be informed of when benzodiazepines are prescribed?
4. How can we tell if benzodiazepines are having a detrimental effect or if tolerance or dependence is developing in our clients?
5. Do you know any clients who are tapering?



When a person decides that he or she no longer wants to take benzodiazepines, a method of withdrawal must be chosen. The process of withdrawal can be approached in a variety of ways. Here is what was reported in our sample:

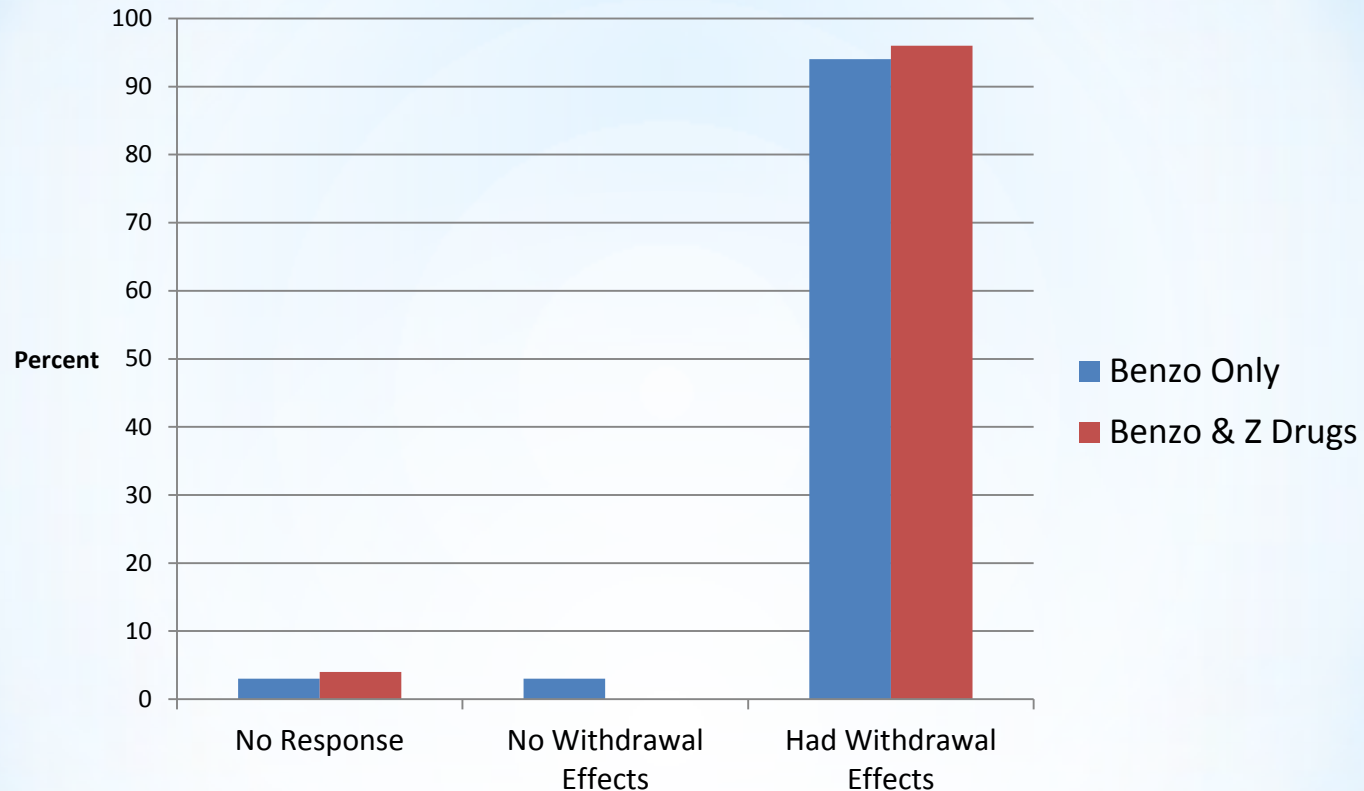


Withdrawal Status



- Of 493 participants, 29% are in the process of completing the withdrawal process, 9% have previously tried but did not successfully withdraw, and 59% have successfully withdrawn. Only 2% have not attempted withdrawal.
- The BenzoBuddies site is clearly a resource for those engaged in the withdrawal process.
- Why are the 59% still active on the site? Just to do survey?

Reported Withdrawal Effects for Each Group



- Of the 493 participants, about 30% had not completed withdrawal.
- Of those who had completed withdrawal (345 in total), 96% reported their withdrawal symptoms continued after discontinuation.
- Only 4% reported that they were symptom free after withdrawal.

Length of Withdrawal Symptoms After Discontinuation

- The average length of withdrawal symptoms reported by those 156 participants (45%) who had discontinued meds and whose symptoms had subsided was Fourteen Months.
- Of those who had completed withdrawal, 139 (40%) were continuing to have withdrawal symptoms, and therefore could not identify when withdrawal symptoms subsided.

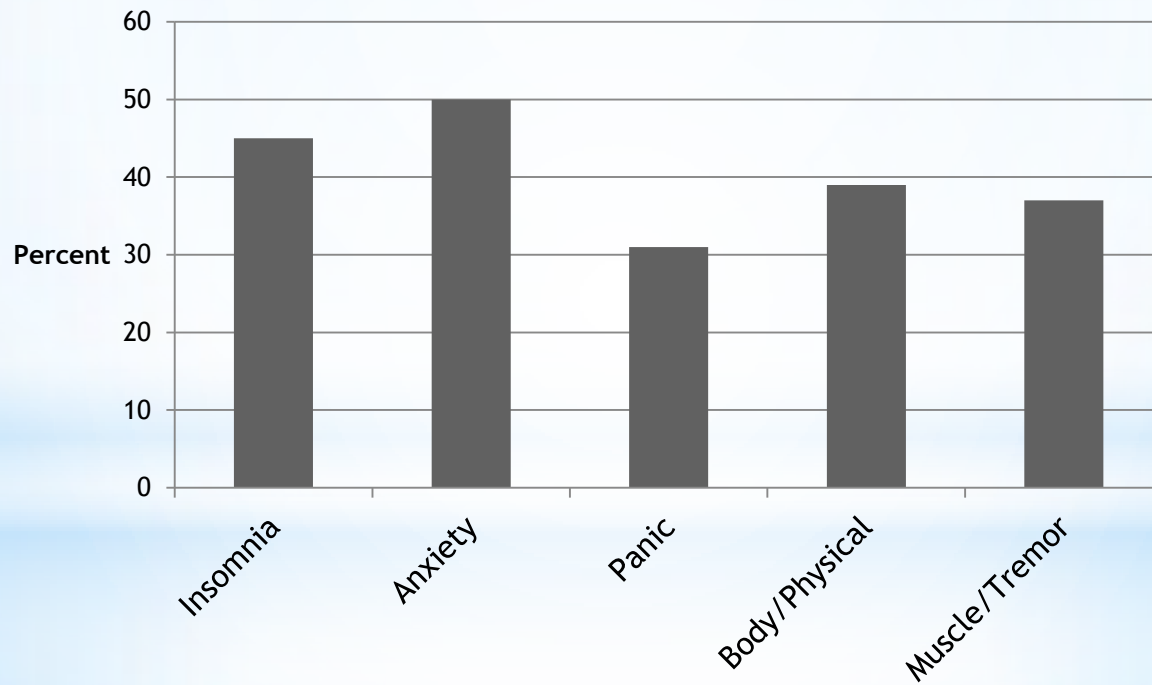


The Withdrawal Process

- Empirical study of the process of withdrawal from benzodiazepines has revealed a rather large number of varied symptoms.
- The discontinuation syndrome that long-term users experience is known to be severe and prevent successful withdrawal (Lader, 2009).
- The Benzodiazepine Withdrawal Symptom Questionnaire has been used to investigate the symptoms reported, and common factors that have been found include perceptual and sensory disturbances, muscular pain, cognitive dysfunction, malaise, dysphoric mood, and memory loss (Couvee & Zitman, 2002).
- More studies have been conducted abroad than in the U.S., despite higher rates of prescription in the U.S.
- Evidence suggests that the clusters of symptoms may be different as the withdrawal process proceeds (Couvee & Zitman, 2002).

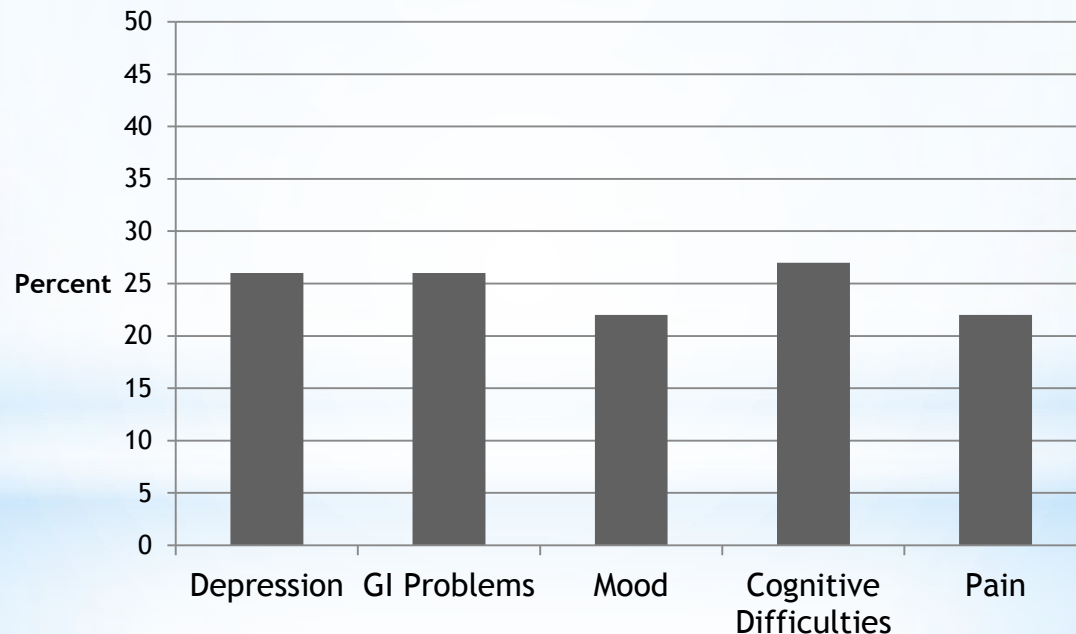
What are the withdrawal symptoms reported by those individuals on this site? In this descriptive study, participants were asked an open-ended question about their withdrawal symptoms, and their responses were categorized. This allowed us to identify symptoms we might not have anticipated. The most common symptoms are below.

Withdrawal Symptoms Reported by More than 30% of Total Sample



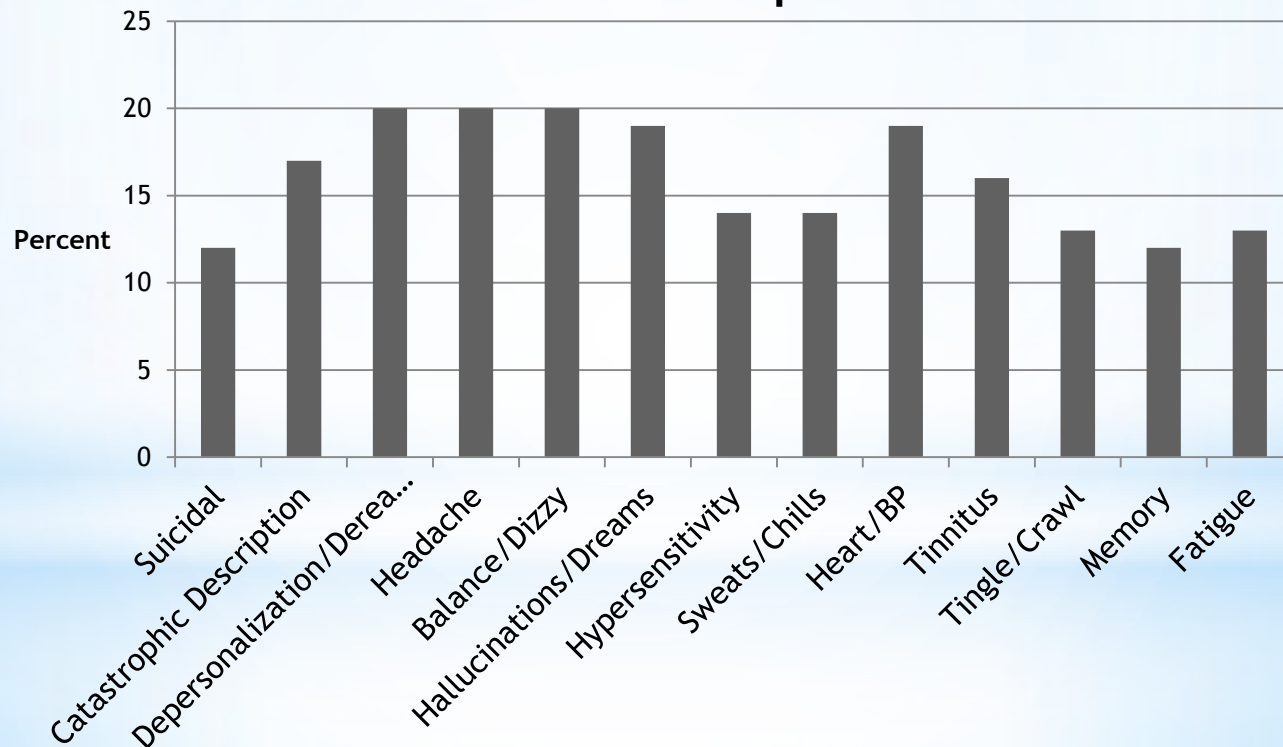
A second set of commonly reported symptoms are identified below. These varied symptoms illustrate why it may be difficult for a patient or a physician to recognize the symptoms as an indication of benzodiazepine withdrawal.

Withdrawal Symptoms Reported by More than 20% of Total Sample

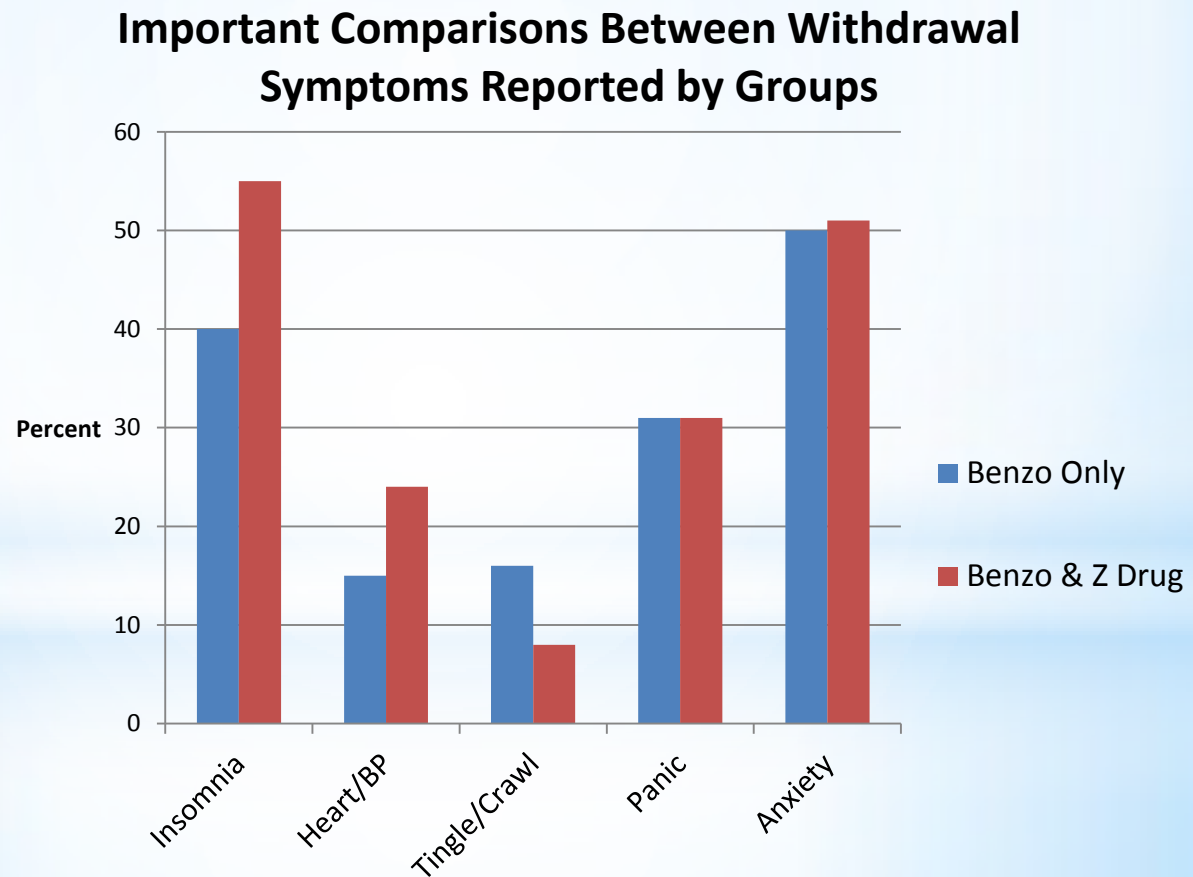


The symptoms below, while less frequent, were still identified by more than 10% of the sample as a part of the symptoms they associated with the withdrawal process. The first two are of particular concern...

Withdrawal Symptoms Reported by More than 10% of Total Sample



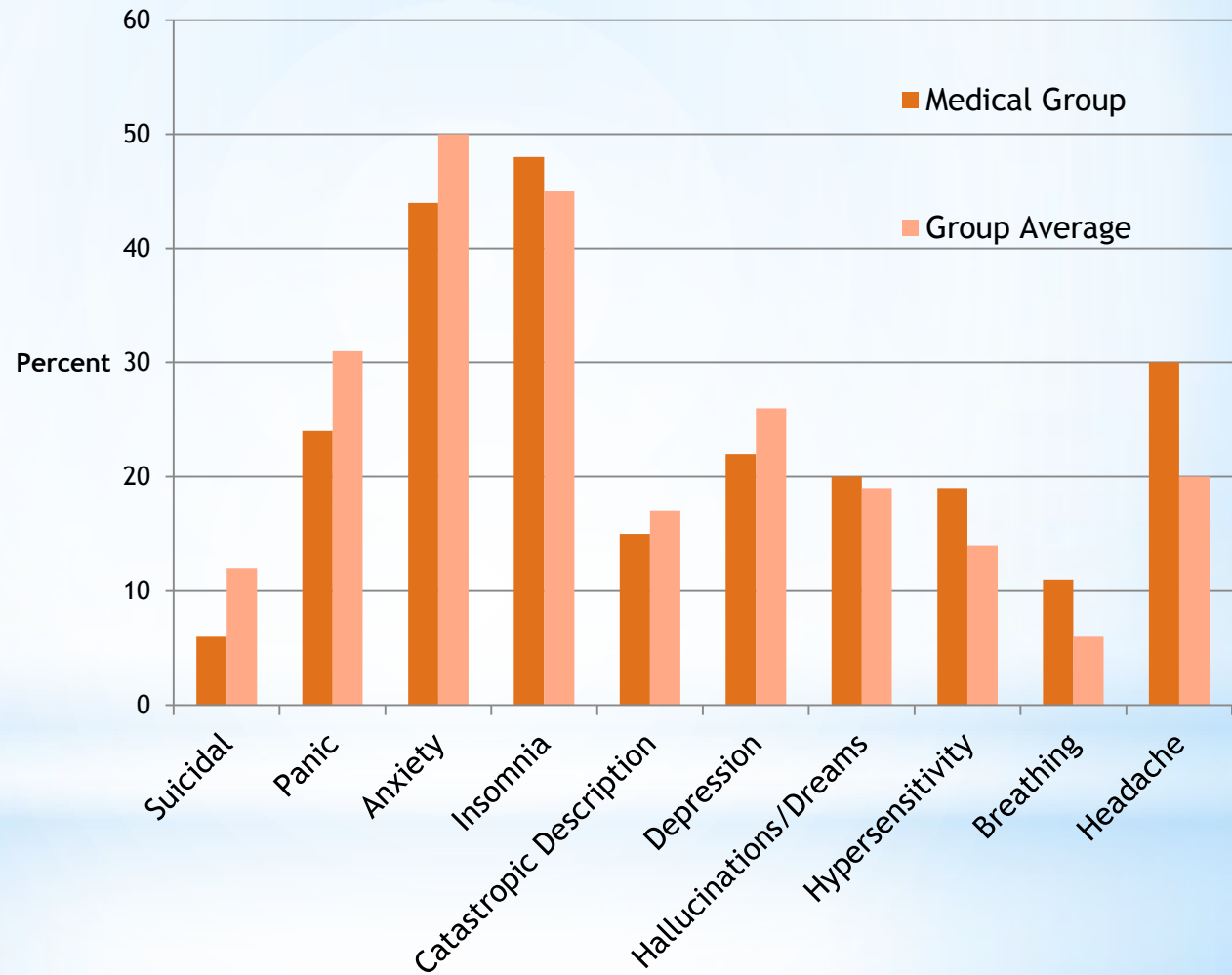
We examined whether the withdrawal symptoms differed for the Benzo Only Group and the Benzo and Z Drug Group. Despite the fact that over 20 symptoms were examined, very few differences were found. We found significantly more insomnia and heart/BP symptoms reported in the Benzo and Z Drug Group. The Benzo Group was significantly more likely to report tingle/crawling sensations.



Comparisons Between Withdrawal Symptoms in Medical Group and Group Average

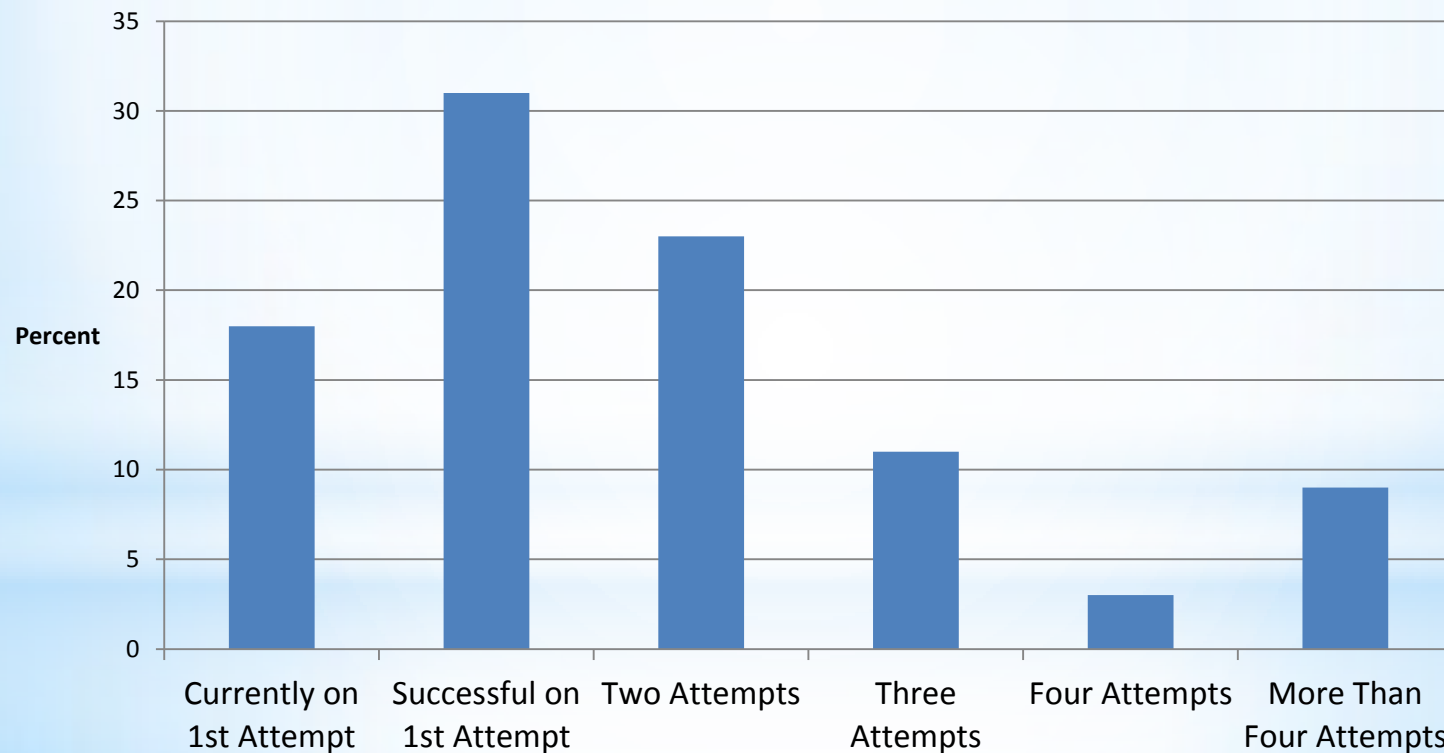
Medical Group (n = 54) differed from Group Average only for Suicidal and Panic symptoms

It is significant that this cluster of symptoms is consistently associated with the experience of withdrawal even in the Medical Group, who have no psychiatric history.

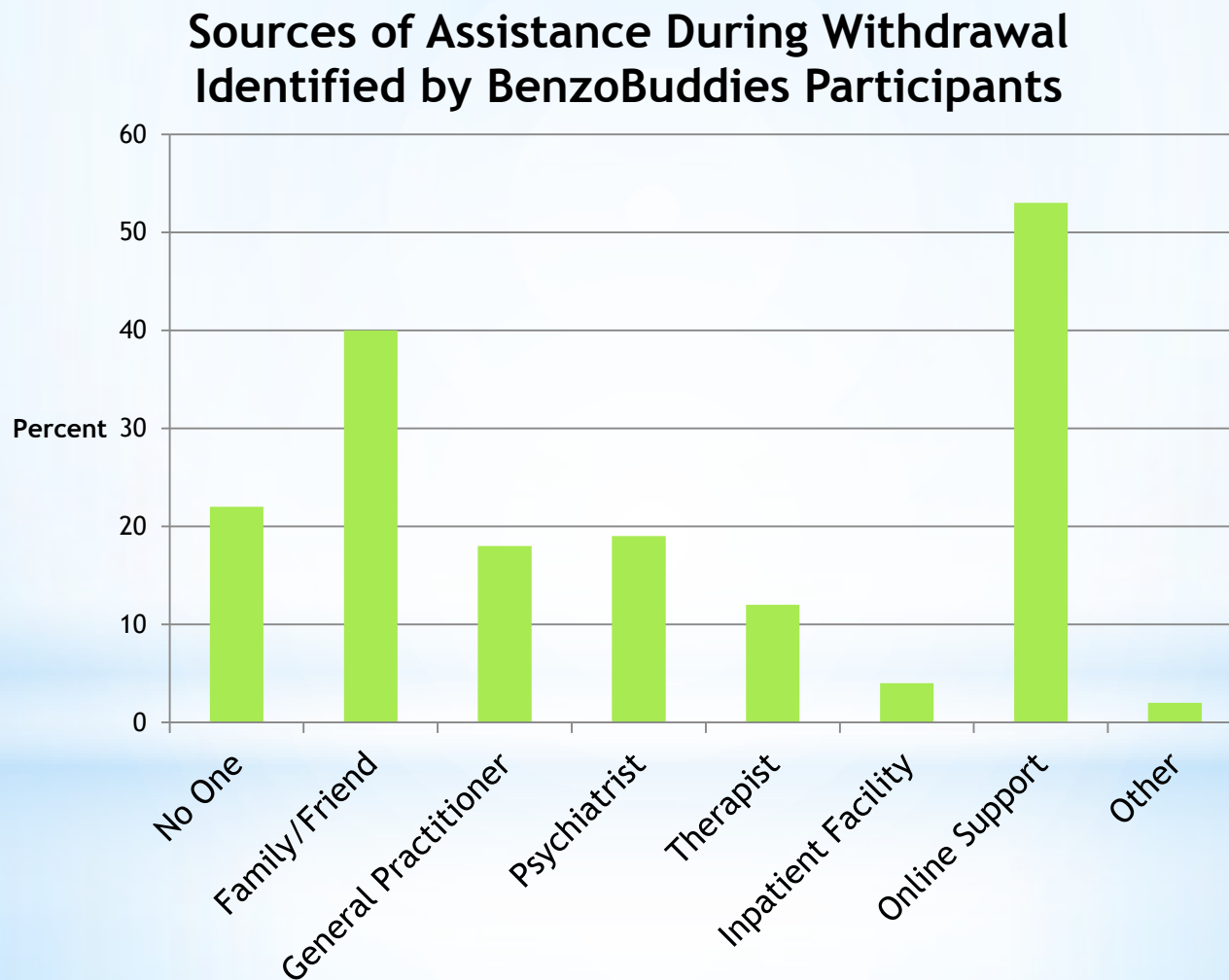


Withdrawing from benzodiazepines is a difficult process, and often is not completed on the first attempt. Only 31% report being successful on their first attempt.

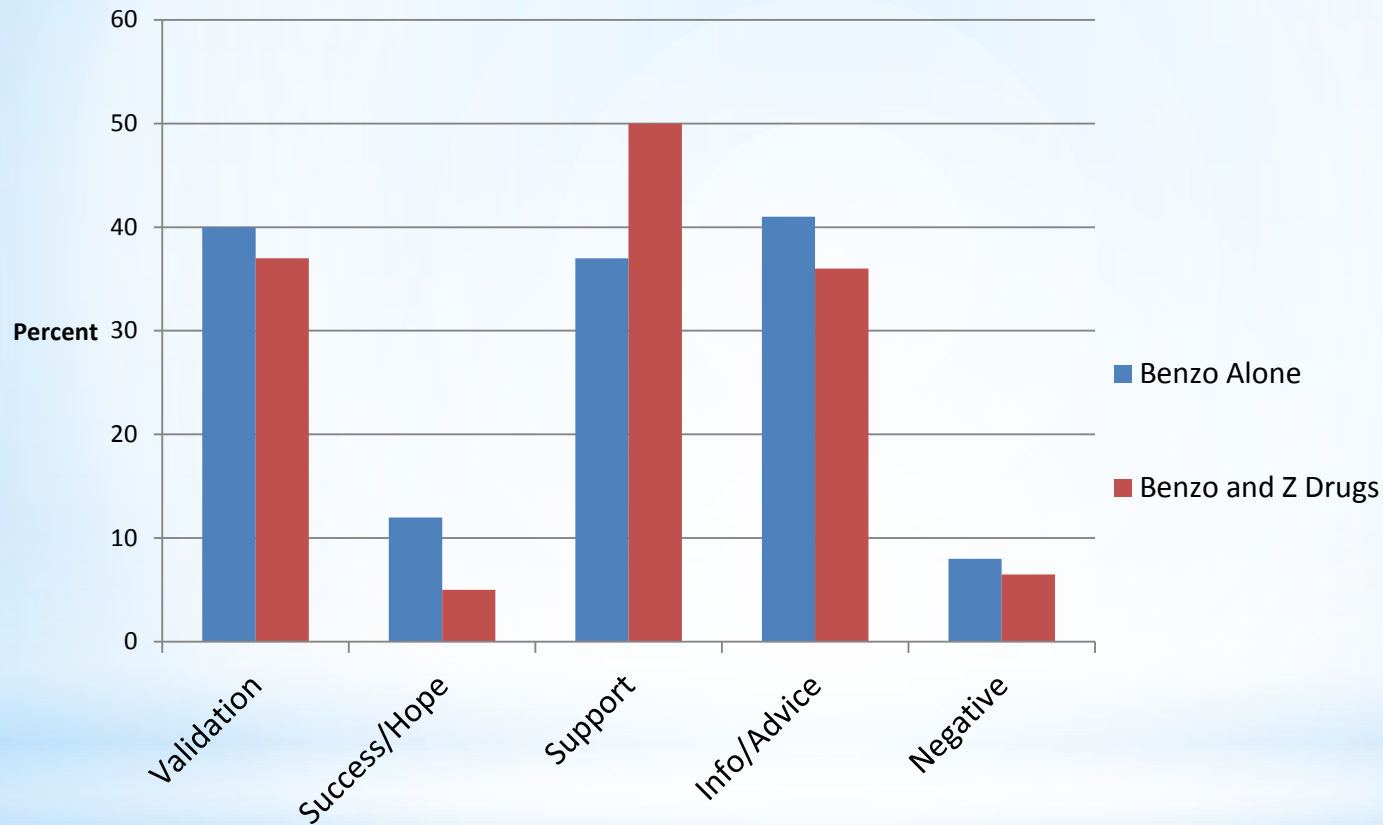
Attempts to Withdraw from Benzodiazepines



Who is Helping these Individuals?



Benefits of Online Support Reported by BenzoBuddies Members



BenzoBuddies participants see the site as a source of validation, support, and advice. The Benzo Only Group reported significantly more Success/ Hope and Benzo and Z Drug Group reported significantly more support.

Back to the Forgotten Group...

- The BenzoBuddies sample may not be representative of all benzodiazepine users, but they are an important indication that we are not serving all anxiety sufferers well.
- Important Questions:
 - Does the frequent prescription of benzodiazepines in this country need to be re-evaluated? Do we have a responsibility to insure that clients have informed consent to be placed on benzodiazepines for longer than four weeks?
 - When benzodiazepines are offered for specific disorder that we know may have a chronic course (e.g., Generalized Anxiety Disorder, Panic Disorder, OCD, or PTSD) are we creating an unnecessary risk of dependence when other treatments are more effective in the long term?
 - Are we offering sufficient services for those who have become dependent on benzodiazepines?

What can we do to help?

- Our clients need to be given clear (written?) information about potential risks of benzodiazepines, including the risks of tolerance and dependence before they agree to take them.
- The impact of benzodiazepine use on specific treatment strategies should be considered.
- When daily use continues longer than 3 weeks, the need for the medication should be reviewed, because dependence can develop as early as 4 weeks.
- Alternative treatments should be considered, including other pharmacological treatments.
- Clients attempting benzodiazepine cessation should be educated, and given medical and psychological support throughout the process (Parr et al., 2008).
- CBT should be considered because it has been shown to facilitate benzodiazepine cessation more effectively than nonspecific supportive therapy, although both provided benefits (Gosselin et al., 2006)

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