

Non-Alcoholic Beer: Relapse or Rehab?

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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Introduction

Non-alcoholic (NA) beverages such as NA beer are becoming a staple in the alcohol section of almost every supermarket. This name in itself is somewhat deceptive as the criteria for “non-alcoholic” is having less than 0.5 percent alcohol by volume (ABV) (27 C.F.R. § 7.65, 2024). Regardless, this beverage has massively grown in popularity for a multitude of reasons. It has fewer calories than regular beer and does not dehydrate the consumer. It allows anyone to enjoy the taste of beer and maintain the social benefits of drinking without having the effect of alcohol in their system. And, does it help one maintain sobriety? Well, this last point is highly contested as both testimonials and research exist on either side of this discussion. Some sources claim that NA beer helps with sobriety (“5 Major,” n.d.) while others state the exact opposite and pose the question “Why risk it?” (Ben-Lev, n.d.).

This association of NA beer as a tool for sobriety was already present in my mind, and I was shocked to discover there is a near 50/50 split as to whether or not these beverages are a useful recovery tool or a trigger for relapse. A huge segment of this debate stems from just how complicated or ingrained alcoholism can be for each individual. Relapse can occur from the aroma, taste, or still slightly present alcohol content found in NA beer which can then cause consumers to seek out alcoholic beverages.

Indeed, the impact of NA beer on those struggling with alcohol usage makes this an issue of vital importance. For example, those under the impression that NA beer is a useful tool for recovery may ingest these beverages, trigger relapse, and lose potentially months of sobriety progress. On the other hand, if these beverages are indeed helpful, those struggling with alcoholism should be aware of such a tool. Additionally, this topic burrows into an ethical conundrum of marketing NA beverages. Should companies be able to suggest these beverages

help with alcoholism? Or instead, should companies have an ethical duty of warning the consumer about it acting as a potential trigger for relapse?

In this paper, I will investigate both sides of the argument that NA beer is a coping method or a relapse trigger and eventually justify the reasoning that the answer lies somewhere in between by using a utilitarian ethical lens. This will be done in three parts: compiling credible research and testimonials that discuss NA beer in the context of alcoholism, describing the ethical lens through which analysis will take place, and analyzing the issue both on an individual and societal level to reach several prescriptive claims.

Literature Review

Alcoholism or Alcohol use disorder (AUD) is a condition described as “an impaired ability to stop or control alcohol use despite adverse social, occupational, or health consequences” (“Understanding,” 2020). This can come in a variety of forms with some signs (alcohol craving) being more obvious than others (increased alcohol tolerance). Surprisingly, a large chunk of the population has some form of AUD. One research paper found that 11.8% of people meet the requirements for having AUD with 13.8% of those people experiencing severe AUD (Nehring et al., 2023). Those recovering from AUD struggle with their greatest obstacles known as triggers. Triggers are negative reactions brought upon by reminders (odors, people, places) of previous negative experiences (“How,” n.d.). These triggers can cause someone to unhealthily cope or relapse. NA beer may meet the criteria for being a trigger in odor, taste, and presence of ethanol.

There is no doubt that NA beer can function as a relapse trigger. One literature review published in the peer-reviewed journal *Nutrients* collated several studies on NA beer and produced a few conclusions. The first conclusion was that drinking NA beer increased alcohol

craving; the craving was strongly correlated to alcohol dependency, where people with more severe AUD were more likely to crave alcohol after drinking NA beer (Caballeria et al., 2022). This result demonstrates how the severity of AUD helps determine the potential for relapse. Part of this correlation may come from another conclusion of the study which was that “heavy drinkers tended to use NoLo [noalcohol or low-alcohol] drinks on top of the existing consumption of alcoholic drinks” (Caballeria et al., 2022). Heavy drinkers who consume these NA beverages when already drunk may have an increased chance of associating these beverages with alcohol consumption. This may then increase the chance for someone to relapse. Such messaging can be found in many addiction center websites where they recommend never drink NA beverages (though they do acknowledge that everyone is different and these beverages may help some) (Nichols, 2023). Aside from the odor and taste, these centers claim that non-alcoholic beverages still have alcohol (0.5%) which may “pave the way to rationalize having a stronger drink” (“The Dangers,” 2021). One small mistake can cause weeks, months, or year, worth of setbacks on the path to recovery. As such, many addiction centers do not see value in the advocacy for NA beverages as a path to recovery. Regardless, the relationship between NA beer consumption and increased potential for relapse unmistakably exists.

Though the research and advocacy against non-alcoholic beer consumption for alcoholics has footing, there are still other research papers and personal testimonials that seem to defy the anti-consumption messaging. One research paper found in *BMC Medicine*, a peer-reviewed journal, investigated the effect non-alcoholic beverages had on total alcohol consumption. In it, they found that providing NA beverages caused participants to consume less total alcohol, an effect which lasted even 8 weeks after testing (Yoshimoto et al., 2023). This provides the promising conclusion that NA beer may help heavy drinkers reduce their alcohol consumption.

The method of easing off of alcohol is generally viewed as a better method than the alternative, “Cold Turkey” (completely cutting off all alcohol), which can bring about harmful and potentially fatal side effects (“Dangers,” 2023). The use of alcohol as a temperance measure can be seen in an additional research paper published in the peer-reviewed journal *Annals of Hepatology*. In this paper, the researchers analyzed the habits of patients undergoing liver transplants due to alcoholic liver disease and how these habits correlated to abstinence. One of their findings was that “the use of alcohol-free beer was associated with a higher rate of 6-months of abstinence” than those who did not consume said beverages (Altamirano et al., 2012). The extent of the survey was 6 months so it is entirely possible that further timespans may not provide the same conclusion. However, this research still demonstrates the correlation between alcohol-free beverages and short-term temperance. As such, the use of NA beverages as an easing-off method is echoed yet again. The potential for NA beer to be a recovery aid can be seen in a plethora of testimonials. On the social media website Reddit, many users have shared their experiences with NA beer as a recovery method. In one such post, a user described how NA beer has been helping them stay sober in a thread containing over a hundred comments each with a user describing their own positive experience with consuming NA beer for recovery (BudgetCoffee2895, 2021). These users, all with varying ranges of AUD, found a path toward recovery.

Intriguingly, conclusions drawn from Caballeria et al. and Yoshimoto et al. appear to be in direct contrast with each other. However, these differences can be partially explained. Caballeria et al. found correlations between cravings/autonomous reactions and NA beer. On the other hand, Yoshimoto et al. found correlations between alcohol consumption and NA beer. Of course, alcohol consumption and craving are quite interlinked, but research does not currently

exist to reconcile this difference in conclusions. Additionally, these two papers further highlight limitations of alcoholism research. Yoshimoto et al. test NA beverages on excessive drinkers but not those suffering AUD. This is because of the ethical limitations that exist from providing a potential trigger to someone with AUD. Comparably, most of the sources collated from Caballeria et al. were created by testing heavy drinkers instead of those with AUD. The sources that were included from samples of those with AUD were noticeably older (1983-1990). As can be seen with these two sources as well as a plethora of preexisting papers, research on the correlation between AUD and relapse is severely lacking.

Methodology

AUD is a disorder that affects both the individual and their community. The importance of reducing the severity and number of people with AUD fits into multiple ethical frameworks. However, the one most relevant for affecting the stigma/messaging surrounding NA beverages is Utilitarianism. Utilitarianism can best be described as “the view that one ought always promote overall well-being” (“Introduction,” n.d.). Such a principle has guided the ethical frameworks and decision-making of many for hundreds of years (as well as influenced political writing and governmental decision-making). This definition is echoed by famous 19th-century philosopher John Stuart Mill in his book *Utilitarianism* where he states, “according to the utilitarian opinion, the end of human action, is necessarily also the standard of morality” (Mill, 1987).

Utilitarianism is a widely known principle with four defining elements: consequentialism, welfarism, impartiality, and aggregationism. Consequentialism states that the justification for one’s decisions are decided by the outcomes of said decision (“Introduction,” n.d.). Another commonly heard phrase that relates to this is “the end justifies the means.” Welfarism states that “the value of an outcome is wholly determined by the well-being of the individuals in it”

("Introduction," n.d.). This means that good and bad can be defined by the welfare of the people subject to ethical theory. The idea of impartiality can best be stated by philosopher Henry Sidgwick in *The Methods of Ethics* that "the good of any one person is no more important ... than the good of any other" (Sidgwick, 1884). As in, the welfare of any individual is equal regardless of status, race, or other distinguishing factors. Lastly, aggregationism is the concept that the welfare of each person should be added up to give an overall value ("Introduction," n.d.). For example, making one life X amount worse while making three lives X amount better is superior to making only one life X amount better.

Though Utilitarianism drives far deeper and into far more complex theories, the final important aspect to describe are the two major types of Utilitarianism: act and rule. Act utilitarianism involves analyzing the consequences of a certain act to determine which decision yields the most utility. Rule utilitarianism involves analyzing the consequences of repeating a certain act to determine which decision yields the most utility. This concept is best demonstrated by an example. An excellent example is provided by college lecture material on Utilitarianism. To quote, "Someone goes to the doctor. The person is ill ... The doctor is aware that the tests all show that the person has a disease that is incurable and life threatening ... The act utilitarian might calculate that in telling the truth there will be a great deal of pain and hardly any pleasure at all ... the ACT utilitarian might calculate that the GOOD is to lie. The rule utilitarian would need to consider what would the long term consequences be if doctors were to lie to those who come to them and have life threatening, incurable illnesses ... The RULE utilitarian might calculate that there is far more harm in lying and so the GOOD is to tell the truth" ("Utilitarianism," n.d.).

The analysis section will involve analyzing the research, testimonials, and conversations surrounding the use of NA beverages as a coping method for alcoholism in the context of utilitarianism. More specifically, the four tenets of utilitarianism will be applied to an act (for an individual level) and rule (for a societal level) utilitarian mindset on the matter. This would then be used to conclude the best decision to make

One additional ethical framework that will be applied alongside Utilitarianism is the NSPE Code of Ethics for Engineers. Adhering to this code is essential especially when making prescriptive claims. This is because some utilitarian views may encourage a principle such as deception (for the sake of overall welfare) while the NSPE document clearly states that deceptive acts should be avoided (“Code of,” n.d.). Again, this will mostly be sought as a secondary guidance tool and the majority of the analysis surrounds Utilitarianism.

Part I: An Individual’s Approach

The choice an individual makes on using NA beer for coping with AUD is highly versatile and dependent on the individual. There are around four broad options an individual can choose to undergo: stop consuming NA beer, start consuming NA beer, continue consuming NA beer, and continue not consuming NA beer. All that is left is to probe different hypotheticals, apply the tenets of utilitarianism to them, and reach a prescriptive conclusion.

The first scenario is that of an individual suffering from AUD who is already on the path to recovery. Thus, two options exist: continue not consuming NA beer or start consuming NA beer. Both research (Caballeria et al., 2022) and advice from recovery centers (“The Dangers,” 2021) indicate that someone in this current position should rarely attempt to consume NA beverages. This is because there is a link between NA beer and alcohol craving. In this scenario, the individual has much to lose by consuming NA beer as it could potentially upend weeks,

months, or even years of sobriety. The weight of this suffering is both subjective and arbitrary but most everyone would agree it is worse in magnitude than the benefits gained from consuming NA beer. Consuming NA beer in this situation would only give a small amount of pleasure from the few new flavors that an individual can enjoy and experience. In this sense, unless the chance of relapse is around 0%, which is a wholly untrue possibility (Altamirano et al., 2012), an individual suffering from AUD will likely end up happiest if they continue without consuming NA beer.

The second scenario is that of an individual suffering from AUD who is currently utilizing NA beer as a recovery method for AUD. This situation touches upon a similar logic from that of the first situation. Utilizing consequentialism, an analysis of the two options (continuing NA beer consumption or halting consumption) can be conducted. There is simply too much to lose by quitting consumption to validate removing a useful coping method. The welfare of the individual is currently being improved and the halting of consumption, while not linked to relapse, can still help cause a relapse by the removal of a coping method. Thus, a general principle can be followed where, if progress is being made, do not change your methods (at least in the context of AUD and coping methods).

The third scenario is that of an individual suffering from AUD who has recently relapsed or has remained unsuccessful in recovery. This situation represents a negative welfare which would be hard to worsen by consuming NA beer. Either way, the relapse has occurred and could only be made marginally worse by NA beer. Therefore, it is better to analyze the benefits of consuming or not consuming NA beer. It is entirely possible that the individual could recover on their next attempt without switching their methods. However, previous literature has proven that NA beer can help people recover when no other methods worked for them in the past. Research

has also found a correlation between having a larger repertoire of coping methods and chance for AUD recovery (Roos and Witkiewitz, 2016). Consequently, a utilitarian lens would suggest that the best method would be attempting a new coping method which has some sort of connection to recovery. In this case, NA beer would fit the benchmark and using NA beer as a coping method would provide a better potential outcome.

The fourth scenario is that of an individual suffering from AUD who is consuming NA beer alongside alcohol. Again, this is a scenario in which the welfare of the individual cannot get much worse. When analyzing the context of the relapse, it is possible that NA beer helped sobriety last longer, it had no impact on recovery, or it hindered recovery. If it is known that the NA beer caused relapse to occur faster, then the individual should stop consuming the beverage. However, determining which of these three options applies can be impossible in some cases. The importance of applying act utilitarianism before rule utilitarianism in individual cases is perfectly demonstrated here as each individual is different. Though broad prescriptions can be made, individual decision-making is a higher priority when there is already known information on how NA beer will affect them. In the case of this scenario, if act utilitarianism cannot be applied, rule utilitarianism is too difficult to apply given the extreme variety of outcomes of this scenario where the weighted probabilities of outcomes cannot even be estimated. Thus, a prescriptive claim should not be made.

One final scenario is that of an individual not suffering from AUD who is either consuming or not consuming NA beer. This scenario exists to include the possibility that NA beer could lead to alcoholism. There is currently no literature out there (that I could find) suggesting NA beer can lead to alcoholism. The odds of this occurring are exceptionally low. Therefore, the outcome that yields the greatest welfare is whichever option makes the individual

happier in the moment. If they want to drink NA beer, the happiness provided by it likely outweighs the near-zero likelihood of an addiction forming. If they do not want to drink NA beer, they should not.

Part II: Society's Approach

The approach society should make can be sorted into two prescriptions: attitude towards NA beer stigma and availability/marketing of NA beer. Attitude refers to the general opinions that friends, family, and the surrounding community have on NA beer. Community is crucial for recovery (“The importance,” n.d.). This is well-known. However, the importance of the stigma and connotation of NA beer is also highly influential on behavior. The second prescription, NA beer availability, refers to the accessibility of NA beer and how it is portrayed by companies (i.e., marketing it as a rehab tool).

The importance of social stigma is derived from the consequences of AUD in communities. Those suffering from AUD not only bring down the welfare of themselves but also others. Of course, the suffering of the individual is of a much higher magnitude, but the welfare of the surrounding community is important for a utilitarian framework, since impartiality and aggregationism must still be applied. An argument could be made that a negative stigma towards NA beer is optimal because a positive stigma would encourage the consumption of a potential relapse trigger. Of course, this would be a valid consequential analysis if there were no other, worse outcomes when giving NA beer a negative stigma. This can be demonstrated in a testimonial. One person suffering from AUD described their experience trying to cut back on alcohol by drinking NA beer at a concert. Their friends found out this person was not drinking actual alcohol, so the person decided to drink alcohol to “avoid the scrutiny of being sober” (Browne, 2021). A negative stigma towards NA beer can potentially break temperance. Thus, it

is important to not discourage the consumption of NA beverages as this leads to less relapse (and higher overall welfare). Instead, the attitude towards such a beverage should be positive in most contexts. This would allow people to feel more willing to utilize another tool on the path towards recovery. In order to dampen the negative consequences, this positive attitude should only apply to people currently using NA beer as a recovery method. Though the stigma of this beverage is disappearing with time (“Non-alcoholic,” 2017), it still exists and hinders the potential recovery process that NA beer has been demonstrated to provide to people.

The second societal approach is NA beer access and portrayal when marketed. Access to NA beer should continue as is. This is because it slightly increases the welfare of those not suffering from AUD and has a neutral or positive impact on those with alcoholism (depending on the scenario). Therefore, the overall welfare is slightly more positive than if NA beer were not allowed to be sold. The more difficult prescription comes with how NA beer is marketed. If it were marketed as a recovery tool for alcoholism, it is possible that overall welfare would improve as NA beer has been shown to help some individuals. However, this would be an act of deception as research is not strong enough and, not to mention, NA beer may bring about relapse to some. This goes against the NSPE Code of Ethics for Engineers which states “Engineers shall avoid all conduct or practice that deceives the public” (“Code of,” n.d.). Not to mention, under the rule of utilitarianism, a company that lies about their product could cause distrust in said company and a decrease in their sales. As such, NA beer should not ever be marketed as a tool for recovery by a party that seeks to benefit from its consumption unless overwhelming evidence is revealed.

Conclusion

NA beverages have undeniably grown both in market size and societal interest rapidly over the past decade. Due to its novelty, research on the topic is novel and not entirely comprehensive. This extends to the topic of NA beer as a tool for relapse or a coping method. There are many ethical concerns that arise from this subject that extend from individual actions to societal stigmas.

In this paper, I investigated the surrounding literature on NA beer being a potential relapse trigger or coping method and applied utilitarianism as a way to provide prescriptive actions for both individuals and societies to undergo to improve the overall welfare of society. For individuals, a more positive outcome is generally reached when those already recovering from AUD continue coping as they have been. However, those who are unsuccessful may improve their welfare by using NA beer as a coping method. In a societal scope, the negative stigma surrounding NA beer has caused some individuals to return to drinking. Thus, the attitude surrounding NA beer should be more positive. Businesses, however, should not adopt this positive stigma by marketing NA beverages as coping mechanisms. The research on this subject matter is lacking, and the prescriptions given only provide a general outcome that yields a higher positive welfare. Each individual is affected differently and, thus, a more case-by-case approach would yield even higher welfare. However, this could not be done given the scope of the paper. As more information about these beverages becomes known, the surrounding debate on this topic is sure to evolve. As such, individuals, engineers, companies, and society as a whole will have to continually adapt to balance the ethical tightrope that is addiction.

References

- Alcohol Content, 27 C.F.R. § 7.65 (2024). <https://www.ecfr.gov/current/title-27/chapter-I/subchapter-A/part-7/subpart-E/section-7.65>
- Addiction Center. (n.d.). How do I handle triggers?. Addiction Center.
<https://www.addictioncenter.com/rehab-questions/how-handle-triggers/>
- Ben-Lev, M. (n.d.). *Non-alcoholic beverages: Are they safe for an alcoholic?*. Maryland Addiction Recovery Center. <https://www.marylandaddictionrecovery.com/non-alcoholic-beverages-are-they-safe-for-an-alcoholic/>
- BRC Healthcare. (2021, September 16). The dangers of non-alcoholic beer. BRC Healthcare.
<https://www.brcrecovery.com/blog/the-dangers-of-non-alcoholic-beer/>
- Browne, K. (2021, November 23). Non-Alcoholic Beer Was a Game-Changer for Me. Why Is It Still So Controversial in Recovery Communities? SELF.
<https://www.self.com/story/sobriety-alcohol-substitutes-controversy>
- Budget-Coffee2895. (2021, November 2). Non-alcoholic beer is saving my life one day at a time [Online forum post]. Reddit.
https://www.reddit.com/r/stopdrinking/comments/qkw2yl/nonalcoholic_beer_is_saving_my_life_one_day_at_a
- Caballeria, E., Pons-Cabrera, M. T., Balcells-Oliveró, M., Braddick, F., Gordon, R., Gual, A., Matrai, S., & López-Pelayo, H. (2022). “Doctor, can I drink an alcohol-free beer?” Low-alcohol and alcohol-free drinks in people with heavy drinking or alcohol use disorders:

Systematic review of the literature. *Nutrients*, 14(19), 3925.

<https://doi.org/10.3390/nu14193925>

Gateway Foundation. (2023, November 19). Dangers of quitting Alcohol Cold Turkey. Gateway Foundation. <https://www.gatewayfoundation.org/addiction-blog/dangers-quitting-alcohol-cold-turkey/>

JourneyPure At The River. (n.d.). *The importance of community in recovery*. JourneyPure At The River. <https://journeypureriver.com/importance-community-recovery/#:~:text=In%20recovery%2C%20a%20community%20provides,in%20your%20s,oes%20is%20essential>

Mill, J. S. (1987). *Utilitarianism*. Prometheus.

Mintel Group. (2017, September 15). *Non-alcoholic beer sheds its stigma*. Mintel. <https://www.mintel.com/press-centre/non-alcoholic-beer-sheds-its-stigma/>

NA Beer Club. (n.d.). *5 major benefits of non-alcoholic beer*. NA Beer Club. <https://nabeerclub.com/5-major-benefits-non-alcoholic-beer/>

National Society of Professional Engineers. (n.d.). *Code of ethics*. National Society of Professional Engineers. <https://www.nspe.org/resources/ethics/code-ethics>

Nehring, S. M., & Freeman, A. M. (2023). Alcohol Use Disorder. In R. J. Chen (Ed.), *StatPearls*. essay, StatPearls Publishing

Nichols, B. (2023, July 26). Can you get addicted to non-alcoholic beer in alcohol recovery?.

Desert Cove Recovery. <https://desertcovererecovery.com/blog/can-you-get-addicted-to-non-alcoholic-beer-while-in-alcohol-recovery/>

Queensborough Community College. (n.d.). *Utilitarianism*. Queensborough Community

College. [https://www.qcc.cuny.edu/socialsciences/ppecorino/intro_text/Chapter 8](https://www.qcc.cuny.edu/socialsciences/ppecorino/intro_text/Chapter%208%20Ethics/Utilitarianism.htm)

[Ethics/Utilitarianism.htm](https://www.qcc.cuny.edu/socialsciences/ppecorino/intro_text/Chapter%208%20Ethics/Utilitarianism.htm)

Roos, C. R., & Witkiewitz, K. (2016). Adding tools to the toolbox: The role of coping repertoire

in alcohol treatment. *Journal of Consulting and Clinical Psychology*, 84(7), 599–611.

<https://doi.org/10.1037/ccp0000102>

Sidgwick, H. (1884). *The Methods of Ethics*.

U.S. Department of Health and Human Services. (2020). Understanding alcohol use disorder.

National Institute on Alcohol Abuse and Alcoholism.

<https://www.niaaa.nih.gov/publications/brochures-and-fact-sheets/understanding-alcohol-use-disorder>

University of Oxford. (n.d.). *Introduction to utilitarianism*. Utilitarianism.net.

<https://utilitarianism.net/introduction-to-utilitarianism/>

Yoshimoto, H., Kawaida, K., Dobashi, S., Saito, G., & Owaki, Y. (2023). Effect of provision of

non-alcoholic beverages on alcohol consumption: A randomized controlled study. *BMC*

Medicine, 21(379). <https://doi.org/10.1186/s12916-023-03085-1>