

# Imagining How Your Patient Spends Their Day: Alcohol Research *In Situ*

By Nancy A. Piotrowski, PhD, MAC, NCC AP Commissioner

Imagine if you could see your patients in their daily lives from dawn to dusk, and learn about all the people, places, and things influencing their choices and behaviors related to drinking. As modern-day clinicians, we rarely have the time to go into such detail with our patients. If we did, there looms a potential treasure trove of information we might gather about how to improve our treatments. Fortunately, observational research in alcohol studies allows us a window into such detail.

Technological advances have moved us from observing people anonymously in public places while taking notes, to putting cameras in people's homes (with permission!) to watch interactions of whole families, and now to our modern phone technology that allows for ecological momentary analysis (EMA) as I described in the previous issue of *Advances in Addiction & Recovery*. There are also sensor-based technologies that can be attached to pill bottles and wearable devices to take biological readings such as blood pressure, skin conductance, blood sugar that hold promise for great advances. Dallery et al. (2019), for example, expound upon the possibilities of using remote technologies to increase access to contingency contracting treatment for alcohol and other addictive behaviors, along with delivery of remote incentives, attention to other health-risk behaviors, and even integrated benefits from online communities.

O'Donnell et al. (2019) provides a good example of EMA in a study of drinking among young adults. They were particularly interested in

examining how social context, affect, and drinking motives interacted to influence drinking behavior. Using smartphones, the researchers collected data from 83 young adults three times per day. They found that young adults were more likely to start drinking and consume larger amounts of alcohol if they were surrounded by others drinking. Additionally, their drinking behavior was more likely to conform to the group they were around. Essentially, the situation and reference norms for drinking quantity overrode what were more dispositional drinking motives and quantities for these individuals. They suggest that this work indicates a need for intervention in order to help younger drinkers

consider different choices in terms of initiating and continuing drinking when in circumstances as described.

A study by Duif et al. (2019) also examined alcohol consumption and affect. They used EMA in a nonclinical sample and clearly show how looking in the moment matters. These researchers wanted to see if drinking to cope with negative affect (NA) or positive affect (PA) might lead to risky drinking patterns. They studied 162 adults, asking them to report on their affective experiences and alcohol consumption in response to a signal (e.g., a random prompt for data). They found that for individuals, an average level of NA across a day was positively associated with their likelihood of drinking, but not how much

they drank. Also, NA in the moment was negatively associated with quantity, meaning that the worse the responder felt, the less they drank. In contrast, individual average daily PA level was not associated with

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alcohol consumption. But in the moment, level of PA was positively associated with likelihood of alcohol consumption, not quantity. Essentially, if people felt good on average, they might or might not drink. But in a moment, if they were feeling good, the likelihood they might drink increased but not the amount they drank.

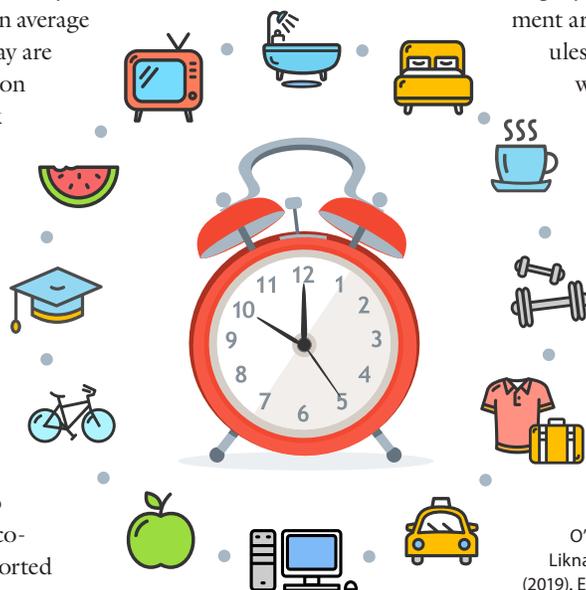
This study shows how an individual feels on average in one day versus in any moment in that day are different in terms of what that information can predict about whether you will drink and how much you might drink. It also shows that the relationships are slightly different for PA versus NA.

Paolillo et al. (2018) also presented an interesting study focusing on alcohol and cannabis use in older adults with and without human immunodeficiency virus (HIV) infection. In their study, 35 adults aged 50-74 were studied using EMA for 14 days, completing up to four surveys per day. Twenty-two had HIV and 13 did not. They were able to demonstrate that lab-assessed values of alcohol and cannabis use aligned with self-reported days of alcohol and cannabis use, as well as quantity of alcohol and cannabis used in the 30 days prior to baseline. This is valuable information because it supports use of self-report data as valid for these types of respondents. They also did not find any differences between the HIV+ versus HIV- individuals in their analyses. For a subset of individuals, they also looked at anxiety, happiness, and pain across the span of a day. Greater anxiety at one assessment predicted use of cannabis and/or alcohol at the next assessment while greater happiness predicted substance use later in the day. Finally, higher pain levels predicted alcohol and/or cannabis use earlier in the day. Essentially, time of day is relevant to symptoms and how patients may respond with alcohol or other substance use.

Key findings across these studies point to the need to look beyond

daily averages and look at what is happening in the daily lives of our patients. Getting to know how the course of a day and its shifting events and experiences affect our patients' needs and well-being will help them

feel better understood. We also might find advantages to recommending trying different tools in the toolbox from treatment around different times of day, shifting schedules, and symptoms that may be on a schedule we have yet to understand but that patients may be able to tell us about if we only ask, "How do things change across the day for you?" Clinically this makes sense – and we have the research to show that, too.



**Reference**

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