Addiction
EDITORIAL
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# Is research in substance abuse undervalued?

*Substance abuse research is undervalued, because research costs are salient while the benefits to research are more diffuse and difficult to quantify. Because of the inherently low value that policy-makers and society place on substance abuse research, it is particularly important for researchers to articulate the benefits of their work.*

The US federal and state governments spent $374 billion on substance abuse (SA) in 2005. Funds were spent on treatment for SA, medical treatment for diseases related to SA, alcohol and tobacco regulation, drug enforcement, the criminal justice system and prevention, among other endeavors [1]. This number provides one estimate of the potential gains to SA research, as it represents funds that would not have to be spent if SA problems could be eliminated through research. However, this figure does not take into account additional gains from reduced suffering of users and their families and the increased productivity.

In contrast, only $1.6 billion was spent on SA research [1]. The comparison of these two numbers leads researchers and professionals in the addiction field to consider the value of SA research to be self-evident to the extent that research helps to alleviate these and other costs; yet many policymakers and much of the public think that public spending on SA is unwarranted.

As SA researchers and health economists, our opinion is that SA research is undervalued. Unfortunately, however, there is little quantitative evidence to support, or refute, our position. As we cannot cite a compelling cost–benefit study on the value of SA research, we suggest instead why SA research may be undervalued and what researchers can do to communicate more effectively the value of SA research.

## WHY SA RESEARCH IS UNDERVALUED

One reason that SA research may be undervalued is that the research costs are salient while the benefits to research are more diffuse and difficult to quantify.

## THE COST OF SA RESEARCH IS SALIENT

A research budget is a clear and concise measure of the costs of research. It provides, in a single dollar figure, an aggregation of all research expenditures. We know, for example, that in 2012, the National Institute on Drug Abuse (NIDA) had a total budget of $1.05 billion, and of that, $884 million was spent on research [2]. The National Institute on Alcohol Abuse and Alcoholism (NIAAA) had a $459 million budget and spent $377 million on research [2]. Similarly, budgets for a particular study or research group are explicit and often available to the public. Costs standing alone, without reference to benefits calculations, make for an easy, cost-cutting target.

## THE BENEFITS ARE LARGER, BUT UNDERVALUED

The value of research is difficult to quantify in a single dollar figure in general, but particularly for SA research. There are several reasons for the undervaluation of SA benefits, as discussed below.

The potential gains to SA research are so broad and long-term in scope that it is unlikely that all benefits will even be considered, let alone quantified. Instruments such as the Addiction Severity Index move the field forward, as they are designed to quantify a subset of key outcomes such as physical and mental health, employment, crime levels and involvement with the criminal justice system, and family functioning [3]. However, most SA studies do not measure all these outcomes and, when they do, the outcomes are rarely aggregated into a single pecuniary measure that is directly comparable to cost figures [4–6]. Further, some studies that estimate the effectiveness of SA treatments only use proxies, such as number of days drug-free, to measure benefits. These proxy measures do not translate well into a full evaluation of gains.

Furthermore, many of the benefits of SA research accrue to individuals beyond substance abusers, e.g. family, community and society. Unfortunately, these spillover benefits are often ignored. For example, research that contributes to the reduction in SA will have positive spillover effects on the prevention of the spread of HIV/AIDS; the incidence of drunk-driving deaths and injuries; mortality and morbidity from second-hand smoke; and the taxpayer burden of public medical costs related to SA. However, fully attributing these spillover effects to a specific study is nearly impossible.

In addition, the stigma attached to addiction leads to a further undervaluation of research that benefits substance abusers. Many individuals hold the misconception that addictive behaviors are a moral failing, which leads policy-makers to diminish the perceived value of SA research to help substance abusers [7,8]. As the Institute of Medicine notes in a recent report, this sense of stigma will only diminish 'as a result of public education and broader acceptance of addiction as a treatable disease' [9].

## MAKING THE CASE FOR SA RESEARCH

Because of the inherently low value that policy-makers and society place on SA research, it is particularly important for researchers to articulate the benefits of their work. We believe there are several ways in which researchers can make a compelling case for funding of future SA research. Specifically, they can:

- Conduct research to identify, measure and monetize outcomes. Doing so will allow a head-to-head comparison of costs to benefits with the inevitable finding that, on average, the benefits greatly outweigh the costs. Similar studies have been conducted on medical research in general and show the large gains to research [10–12].
- Explicate the benefits of their research to scientific, policy-making and general populations. Because the potential benefits are broad, long-term and spill over to individuals beyond the abuser, we need to be explicit and compelling with respect to identifying and quantifying the gains to specific studies. Such efforts by individual researchers would complement efforts of organizations such as NIDA and NIAAA by offering a more personal perspective.
- Help to overcome the stigma attached to SA through research on stigma and the causes of addiction. NIDA is currently paving the way in this endeavor with their internal and external research agenda on SA as a brain disease [13]. Research, combined with NIDA and other organizations' efforts to educate society [14,15], should reduce stigma and increase the value placed on SA research.

In these ways, SA researchers can make an active and concerted effort to communicate the value of their work to broader audiences. Doing so is critical for the future of SA research.

### Declaration of interest

None.

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