Social Smoking: A New Public Health Threat to Young Adults A Systematic Review

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Abstract

**Background:** Rates of cigarette smoking among young adults between the ages of 18-26 have risen slightly over the last ten years, counter to past and current public health campaigns warning against tobacco use. Some of this may be due to an increase in light, social smoking, a relatively new phenomenon that seems particularly common in young adults. Few studies have investigated social smoking and how public health efforts can counter it.

**Objectives:** This review aims to summarize current research on social smoking, including: definition, characteristics, rates and health risks.

**Methods:** Health databases were searched to identify journal articles using the terms: “social smoking; young adults; light smoking;” Limiting factors included: time frame: 1995-2015; location: United States; Age: 18-26.

**Results:** From the selected search parameters, nine articles were identified as relevant to addressing the growing popularity of social smoking in young adults in the United States. These studies identified social smoking habits as carrying the same health risks as daily smoking, and to be increasing among young adults.

**Discussion** Social smoking is increasing among young adults and trends show it may continue to do so. Contrary to popular belief of occasional smokers, social smoking is dangerous and poses a threat to both individual health and the overall health of the United States. More research needs to be done on the topic of social smoking in order to create relevant, effective public health campaigns, and messages young adults will respond to.
Introduction

In 1964, the Advisory Committee to the Surgeon General of the United States of America publicly declared the dangers of cigarette smoking. The 386-page report highlighted evidence of these dangers, including the increased risk smokers were at for developing numerous forms of cancers and diseases in comparison to nonsmokers, listing each and the percentage at which the rate increased.

Since that report, released over 50 years ago, the number of smokers and rates of current cigarette use among American adults (defined as >18 years old) have decreased dramatically. A report by the U.S. Surgeon General in 2014 stated that the rate of those who smoke cigarettes decreased from 43% to 18% over the last 50 years, from 1964 to 2014. This reduction in smoking is considered to be one of the greatest public health successes of the century. This dramatic decrease is encouraging, yet despite successive reports following the Surgeon-General’s report, all detailing the dangers associated with tobacco, cigarettes are still in use by approximately 17.8% of American adults. The continued use of cigarettes by those smoking around the time of the initial Surgeon General’s report was expected, due to the addictive nature of the tobacco and in cigarettes and the lack of cessation tools or resources available immediately following the report. However, initiation of smoking by younger generations who have been exposed to public health messages throughout their lifetime via anti-tobacco campaigns implemented in schools across the United States is increasing. Many of these new smokers become regular smokers. In 2014, the Surgeon General of the United States reported that over 2000 young adults switched from occasional or light smokers to regular smokers every day.
One reason behind the increased rates of tobacco smoking among young adults may be changes in smoking patterns, particularly the emergence of a phenomenon referred to in current research as social smoking. There is evidence that the number of young adults (defined as those between 18-26 years old) who are smoking cigarettes has increased over the last twenty years. Importantly, even though smoking rates have increased, these increases are only found in reports of “last month tobacco use” and not as regular cigarette use. (Appendix A) The growth of social smoking within this age range may result in a new generation of younger smokers. As the rate of smoking has increased only among young adults, it is important to identify unique habits and characteristics of this age group when attempting to explain an increase exclusive to their demographic.

One researcher and a pioneer on the study of social smoking, Mimi Nichter, found many young adults were beginning to engage in this habit. During her research, she interviewed one student who frequently smoked while with friends or at parties. When asked about smoking in college, she responded: “Now’s the time to party hard with friends, stay up late, smoke and drink and just enjoy myself… I’m sure I won’t be smoking when I’m done with college.” The relaxed attitude of young adults towards smoking as expressed by this student, puts the successful public health campaign against cigarette use at risk.

As new health behavior patterns and/or trends begin to develop, it can be difficult to identify the exact nature of the trend or agree on a name or definition of the behavior. The emergence of light smoking in a social setting has been no exception. The inability to clearly define “social smoking” or form consistent survey questions to ask young adults...
at risk for light-smoking behavior resulted in inconsistent data and responses, depending on the definitions and questions used by various researchers.

Over the past 15 years, public health officials have began to focus more effort on an increase in tobacco consumption in the young adult population. Their focus in funding and time has shifted to cigarette use in social settings, something long valued and utilized by tobacco companies in marketing and advertising campaigns toward young adults and adolescents.

The goal of this review is to summarize current research on smoking in young adults, focusing on infrequent or social smoking. An understanding of this behavior will allow the creation of effective public health campaigns that target young adults and the habit of smoking when in social situations.

Methods

The literature search for this review started by using the terms “tobacco use” and “young adults” to search two health databases: PubMed, the MEDLINE database for journals pertaining to life science and CINAHL. The purpose was to determine the common responses for and/or reasons behind smoking behaviors of young adults. As “social smoking” was a result with high frequency from the initial terms, it was included in further research. Further searches were narrowed to English language articles and studies in the United States. However, one study on college students in Canada was included as a comparison for American students as well as a paper from the Netherlands, which addressed the effects of peer pressure on the likelihood to smoke between young adults. No such study has been conducted in the United States.
Age was defined as >18 years to eliminate studies of adolescents. These search criteria yielded 28 articles, nine of which were rejected as they focused on smoking habits and patterns of young adults outside of the United States.

As articles regarding young adult smoking were identified, “social smoking” and “young adults” began to emerge as some of the most common results and paper topics yielded by both database. Searches were adjusted using alternative phrases that focused on smoking in social situations. These phrases included previously referenced terms explaining similar behavior, namely “light smoking,” and “nondaily smoking.” Following the expansion of terms, search terms were once again narrowed to “social smoking” and “young adults,” then to “social smoking” and “college students.”

The book *Lighting Up: The Rise of Social Smoking on College Campuses* by Mimi Nichter was the source for additional articles and identified researchers who had focused on these trends in a collegiate setting. This book was used to provide supplementary information and to help narrow the question and definition of social smoking. Due to the lack of a widely accepted term for social smoking, any research which included smoking defined as occasional, light, nondaily or social smoking amongst young adults in a social setting were included in this review. Nine articles fit these final criteria and were included in this review.

**Results**

The research articles identified as relevant to the research question all had a definition of social smoking, a focus on young adults ages 18-26, and an inclusion of facts or figures about rates of social smoking, including the reasons behind the behavior
and smoking pattern (Appendix A). Though no common definition of “social smoking” was identified, many researchers found similar smoking trends and patterns among young adults. Sutfin et al., in research done across multiple college campuses, defined three types of light smoking. These included nondaily smoking, occasional smoking and social smoking. Social smoking has been defined in other ways, but most commonly as either a person who smokes primarily with others rather than by himself or herself or as smoking that only takes place at a party or when socializing. Other academic researchers did not specifically use the term “social smoking,” but rather focused on “light” or “nondaily smoking in a social context.” These papers included the harmful ramifications that may follow from these patterns. Moran et al. defines social smoking as those who primarily smoked with others rather than alone. Waters et al. defined it as those who smoke when they go out or with others. Other articles focused on the overall increasing national trend of smoking and identified possible causes.

A number of journals focused on smoking habits of young adults and data on the number of nondaily smokers, as well as smokers who only smoke occasionally. After the initial profiling of smokers, most researchers asked questions through a variety of surveys pertaining to why young adults smoked, including details surrounding their initiation and whether they continued to smoke. Further, they identified similarities among smokers who defined their behavior as only smoking in a social context. Attitudes indicating a young person’s belief that habits developed in young adulthood would not continue later in life, or have any adverse health effects, were identified in several studies. This was especially true in those college students who smoked only occasionally. Many expressed the belief that they had the ability to quit soon after they left college.
Students who only smoked on rare occasions reported a much higher level of confidence of being able to quit, yet reported higher levels of not wanting to quit.xix

Researchers found most young adults generally accepted smoking while in social settings and that when around their peers, young adults would often feel pressure to smoke or feel that smoking was encouraged.  xx These relaxed attitudes toward smoking may develop in social settings, but as young adults moved toward more frequent smoking patterns outside of young adulthood, these attitudes may remain. Longitudinal studies conducted with college alumni found that those who began a pattern of social smoking in college continued smoking habits after college, while retaining the attitude toward cigarette smoking as a harmless habit they can stop at any time. xxi In addition, social or non-daily smoking proves dangerous as it may function as a gateway for a long-term, possible lifetime habit, yet there are neither conclusive results on the numbers who smoke in these ways, nor any consistency in the definition.

Another issue related to rates of social or non-daily smoking is the fact that surveys typically require self-identification of the smoking behavior. The number of college students who engaged in social smoking and who declared themselves as “smokers” varied from university to university, but all universities reported certain occasional smokers being reluctant to self-identify as smokers. One report found 24% of students self-reported as occasional smokers, not as smokers specifically, even though they smoked on average more than once a week.xxii Other research only gave details on the percentage of self-described smokers who reported occasional smoking. This is an important difference between those smokers who report occasionally smoking for data collection and health assessment purposes. The number of young adults who
occasionally smoke but refrained from identifying as a smoker varied between journals, with the highest found to be 70%\textsuperscript{xxxiii} of current smokers solely smoked occasionally.

The initiation of social smoking among college students commonly included the use of cigarettes in conjunction with the use of alcohol.\textsuperscript{xxiv} One study found that girls who frequented bars and had more friends were at a much higher risk than all other groups to begin socially smoking.\textsuperscript{xxxv} The habits of this type of smoker (dual tobacco-alcohol use) most frequently developed in smaller social contexts where smoking cigarettes was widely accepted by students as a right of initiation in college.

Across responses throughout each journal article, the attitudes that occasional smokers had regarding their own habits were similar. When questioned about their current smoking patterns, many people who did not smoke frequently or who only smoked with others did not describe or identified as a smoker\textsuperscript{xxxvi}. Yet, reports found that those who smoke, even on occasion or as little as one cigarette per week, are still at a much higher health risk compared to those who never smoke, to develop multiple health problems later in life, including higher risk for coronary problems, increased risk of stroke, weak aortas, heart disease, premature death, cancer, respiratory tract infections, delayed chances of conception, slower recovery times, cataracts, frailty, poorer quality of life.\textsuperscript{xxvii} Some health effects associated with smoking, such as lung cancer, throat cancer, and heart disease, are commonly believed to occur only in those with long-term smoking habits or history. However, this is not correct.

The studies included in this review show that even one cigarette can lead to lasting health effects on one’s body.\textsuperscript{xxxviii} Research done by the Surgeon General of the United States has shown that each cigarette has the potential to harm one’s DNA and
increase the likelihood of developing cancer. xxix This knowledge is typically not emphasized in public health campaigns or in visits with healthcare providers. Further, infrequent or social smokers are at risk of not receiving cessation support or tools from healthcare providers because they do not report they are smokers. Finally, since social smokers may not consider themselves smokers, they may not report accurate information to surveys such as the Behavioral Risk Factor Surveillance System (BRFSS) or the Harvard College Alcohol Test, reducing the ability of these instruments to accurately estimate smoking rates.

Conclusion

The precise rates of social smoking in young adults are difficult to determine accurately. However, there is evidence that the numbers are high and are increasing and recent research suggests a need to address the problem.

Young adults are generally the target population of public health efforts to reduce smoking, especially through campaigns around schools. xxx The fact that smoking rates are increasing in young adults suggests a possible lapse in the effectiveness of anti-smoking efforts on their targeted audience. As U.S. law mandates education up to 16 years of age, it can be assumed a majority of young adults in the United States have seen or been engaged by these anti-tobacco or anti-smoking campaigns. However, smoking rates have hovered steadily around 20% of young adults, with the possibility that the numbers may actually be higher due to the instances found in this study that some tobacco users do not consider themselves to be smokers, and do not self-identify as smokers.
Common explanations young adults give regarding their reasons to smoke in social settings focused on the influence of alcohol and the peer pressure of friends. Prior to research in social smoking, smoking among young adults was often attributed or linked to mental health or psychological issues like depression or anxiety\textsuperscript{xxx}. In this scenario, it was suggested that intermittent or light smoking was a form of anti-depressant. Though this still might hold true, the studies in this review suggest other factors may play a larger, more important role in the initiation of cigarette smoking. The most common form of light smoking did not seem to be determined by mental health. Rather, smoking is used by young adults today as a social tool, typically on weekends when surrounded by alcohol or in social-engaging atmospheres.

With overwhelming evidence demonstrating the dangers of smoking, rates of smoking continue to slowly grow through the increasing trend of social smoking among young adults. Even with these well-documented and proven negative health effects, the increasing trend of social smoking shows young adults have become less receptive to public health messages or that they only attribute the dangers of smoking to chronic and long term cigarette use. Throughout these articles, a concern that was frequently expressed by researchers and health professionals was the increased chance of these occasional smokers becoming regular smokers. However, there is evidence that even occasional smokers who don’t become regular smokers still face very serious health consequences and put themselves at risk for problems later in life. It appears that the adverse health risks resulting from light or infrequent cigarette use are not well known to young adults, or if they are, young adults do not respond to fears of these risks.
Another important aspect of light smoking that should be addressed by public health officials is the lack of tobacco reporting among social smokers, as many will not self-identify as smokers or cigarette users. The exclusion of these occasional smokers from these data means that public health educators, administrators and policymakers may lack the information to make educated decisions in regard to support of cessation or prevention programs. The impact of this lack of information may be seen in the declining numbers of tobacco-focused public health initiatives in recent years.

Though these articles provided insight into what social smoking looks like and why students are attracted to it, many questions remain unanswered due to lack of clarity in a concrete definition of social smoking. This leads to a lack of a consistent way to categorize social smokers, and this makes it more difficult to create public health campaigns targeted toward specific smoking patterns. Once an accepted definition for social or infrequent smoking emerges, researchers will be better able to collect data on smoking patterns and evaluate the success of newly designed prevention programs.

The earliest report within the parameters of this search that referenced social smoking in this review was written in 1991, referencing the social aspect or environments as a common initiation of smoking amongst adults. Since the 1960s, tobacco companies have acknowledged the importance of social environments and atmosphere for attracting new smokers. Their research and development gave them a solid foundation on which to base their studies and questions. Research papers in the files of large tobacco companies, including Philip Morris and RJ Reynolds, suggest that tobacco companies had identified the importance of the social environment in relation to smoking behaviors during research conducted in the 1970s. This included both smoking initiation, as
well as the development of lifelong smoking habits. Further, they showed that young adults placed high value on the influence and behaviors of their peers in the formative years of young adulthood.

Early marketing efforts used this research to attract young smokers and create messages that suggest smoking as a way to bring people together or as an activity to be done in groups (Appendix B). By targeting these groups at a young age, the tobacco industries created a group of smokers who engaged in smoking due to social pressures from these advertising campaigns. When they started smoking as youth, the odds of them continuing to smoke for life greatly increased. Though this pattern of smoking was identified early on by tobacco companies, medical and public health professionals are only now identifying its potential to lead to new smoking habits and addictions.

It is important for public health officials to develop marketing efforts targeted toward the same young, socially-motivated adults with campaigns to promote healthier activities and emphasize the social aspects and benefits of healthy lifestyles choices. These campaigns can mirror those of larger tobacco campaigns through emphasizing solidarity in choosing to not smoke. These campaigns are effective for tobacco because of the need for young adults to be with others and to they feel as if they are not alone in their actions.

Current anti-cigarette ads targeted toward young adults typically play on fear and the long term health impacts associated with tobacco use, which may not be effective in this age group. Campaigns mirroring the design and style of early tobacco advertising, namely social engagement and fun with peers, might be more effective with the emerging generations of young adults. Tobacco prevention initiatives may be at an important
turning point, and the time for new and innovative public health initiatives and planning may have arrived.

There are limitations in this review, primarily due to the inconsistency of the numbers and definitions. Because there is presently no consistent definition for social smoking, it is hard to compare the numbers provided by different researchers and to make comparisons in the changes of social smokers over time. Also, the answers collected regarding tobacco usage and attitudes are all self-reported making the data collected potentially unreliable. In order to effectively address social smoking, steps must be taken to fix these inconsistencies.

The sharp decrease in the number of smokers in the United States from 1964 to 1974 is one the greatest public health victories of the 20th Century. However, the new trend of social smoking, or smoking only with others while in a social setting, puts this public health victory at risk. As technology and education progress and evolve, so must public health approaches. At a time where independent thought is cherished and encouraged, social smoking must not be allowed to gain respect or acceptance among peers. In order to reduce the rates of smoking, both regular and light smoking, among young adults, campaigns must be tailored to address the changes in 21st century smoking habits, not merely the recycling of old campaigns or marketing materials. It is clear that public health campaigns are needed in order for young adults to learn the dangers of occasional smoking. This will require more research and a refreshed message that focuses on social smoking. It is up to both the private and public health sectors to ensure this happens.
# Appendix A: Summary of Papers Included in This Review

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Place of Study, Number of participants, Study Type</th>
<th>Abstract</th>
<th>Summary</th>
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<tbody>
<tr>
<td>Social Smoking Among US College Students</td>
<td>Moran, et al. (xiii)</td>
<td>Across the United States. 10441 college students, self-report</td>
<td>Tobacco industry identified segment of social smokers who do not care about health consequences, just reputation. Definition of social smoking: “Smoking mainly with others rather than alone” Current smokers: 51% mainly with others. Social smoking more common in light smokers. Occasional smokers with social smoking patterns less likely to try to quit even though less nicotine addiction usually indicates a stronger desire to quit.</td>
<td>Smoking with others is an important aspect to a majority of current smokers. Those who smoke socially are less likely to want to quit.</td>
</tr>
<tr>
<td>Tobacco Use by College Students: A Comparison of Daily and Nondaily Smokers</td>
<td>Sutfin, et al. (xii)</td>
<td>Across the US, 4100 college students, self-report</td>
<td>Nondaily smokers are not likely to be targeted for intervention or recommended for treatments. Nondaily smoking accounted for most common cigarette use among college students (70%); daily smokers were on average older, signifying importance of targeting the younger nondaily smokers; most common amongst those with higher affluence and those that are the most socially engaged among peers.</td>
<td>Intermittent smoking in social settings is popular among college students, yet most do not want to quit and do not heed public health warnings.</td>
</tr>
<tr>
<td>Light and Social Smoking Carry Cardiovascular Risks</td>
<td>Harvard Heart Letter (xvii)</td>
<td>Article published by Harvard, Cambridge, MA</td>
<td>Intermittent smoking is less risky than heavy smoking, but still very dangerous. 1/3 of smokers are light smokers, Light smokers don’t consider themselves to be smokers. Risks including, weak aorta, heart disease, premature death, cancer, respiratory tract infections, delayed conception, slow recovery times, cataract, frailty, poorer quality of life. Smoking just one cigarette can increase heart disease risk</td>
<td>Smoking lightly poses a health risk and should be avoided and the warnings of the dangers widely publicized.</td>
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<td>Schane, et al. (xxiii)</td>
<td>University of San Francisco, CA. Systematic review between 2006-2008 around occasional smokers,</td>
<td>Tobacco companies before public health officials identified social smoking as a way to connect with peers on a social level The odds of smoking increase while in a social setting. This has led to growth in nondaily smoking especially in young adults. Prevalence increasing, yet dangers are typically not recognized. In US 16% (1997) to 24% in 2001. Different methods need to be created which distinguish between heavy and light smoking. Philip Morris funded “Socio-Cultural Studies on Tobacco Program” RJR conducted “Social Costs/Social Values of Smoking Project” Smokers figured risks were low and they could quit anytime. In turn, products were created to appeal to light smokers. Cessation motivation lays potentially in widespread knowledge of dangers to others as opposed to oneself.</td>
<td>Tobacco companies identified the importance of smoking in a social context for initiation, but recent trends in increased young adult use and patterns have drawn public health attention.</td>
<td></td>
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<tr>
<td><strong>The Natural History of Light Smokers: A Population-Based Cohort Study</strong></td>
<td>Levy, et al (xxi)</td>
<td>Massachusetts, 2009. 3083 young adult smokers, Self-report over longitudinal study.</td>
<td>Changing trends indicate that people who are younger and have a higher socio-economic status tend to be nondaily smokers, typically in a social smoking situation. Common amongst younger smokers, but needs to be addressed as it still carries significant health risks.</td>
<td>Young educated adults frequently smoke in a social smoking context.</td>
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<tr>
<td><strong>Characteristic of Social Smoking Among College Students</strong></td>
<td>Waters, et al (xiv)</td>
<td>United States: Midwestern Universities, 741, mailed surveys completed from 7 universities</td>
<td>Growing trends in “I only smoke when I go out” College students will begin to smoke in social atmospheres as it is widely accepted. Tobacco companies acknowledged the importance of atmosphere early on to smoking initiation, early ads targeting; now ads are even more targeted to youth. Confidence in quitting is higher amongst daily smokers, but motivation is equal between daily and nondaily smokers.</td>
<td>Smoking while drinking among reporting college students is very high, yet students never report that are actual smokers.</td>
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<tr>
<td><strong>Factors Related to Smoking in College and not in College Young Adults</strong></td>
<td>Koval, John et (xxi)</td>
<td>University of W Ontario, Canada, 1270 total, self-reported questionnaires</td>
<td>Correlates that affect smokers strongly are cigarette use by friends and use by family. Those with more money who smoked with friends tend to smoker more than others lower on the socio-economic status. The current health of these students impacted use, as did their perception that they would be able or unable to quit.</td>
<td>Students and nonstudents who went to bars, had parents who smoked, and were in a higher SES been more likely to smoke and believe they would continue to smoke.</td>
</tr>
<tr>
<td><strong>The Impact of Active and Passive Peer Influence on Young Adult Smoking</strong></td>
<td>Harakeh, Z et. Al (xi)</td>
<td>Netherlands, 68 self-described smokers, mix of college students observed</td>
<td>Study of current smokers and what prompted them to smoke, whether direct pressure or passive pressure and observations were stronger correlates to students smoking.</td>
<td>Students were more likely to start smoking after seeing a friend smoke than being encouraged to smoke.</td>
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<tr>
<td><strong>Occasional smoking in college: Who, what, when and why?</strong></td>
<td>Brown, et al (xvi)</td>
<td>Medical U of South Carolina, Wake Forest School of Med. 53 students in eight focus groups in Southeastern universities</td>
<td>Increasing number of college kids who smoke, “We're just smoking.” Definition of addiction was compared to alcohol use: “Occasionally I smoke but I wouldn't say I'm a smoker; it's like saying that Occasionally I drink versus saying I'm an alcoholic.”</td>
<td>Trial cigarette use begins in college in social settings, but typically increases and progresses with stress levels.</td>
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Appendix B:

2004 to 2010 SAMHSA National Surveys on Drug Use and Health (NSDUHs).\textsuperscript{xxxv}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure2.png}
\caption{Past Month Cigarette Use among Persons Aged 18 to 25: 2004 to 2010}
\end{figure}

2004 to 2010 SAMHSA National Surveys on Drug Use and Health (NSDUHs), compiled by US Surgeon General 2014 Report\textsuperscript{xxxvi}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure3.png}
\caption{Percentage of middle school 8th graders, high school seniors, young adults (18–25 years of age), and adults (\geq 26 years of age) who currently smoke cigarettes; National Youth Tobacco Survey (NYTS)\textsuperscript{a} 2009 and National Survey on Drug Use and Health (NSDUH)\textsuperscript{b} 2010; United States}
\end{figure}
Appendix C: Early Tobacco Ads with Social Desires Illustrated

Kool Cigarette Advertisement: 1980

Newport Cigarette Ads “Alive with Pleasure” Campaign,
i Center for Disease Control, "History of the Surgeon General’s Reports on Smoking and Health", 2006
iv Ibid.
ix Ibid.
xi Ibid.
xv Moran et al.
xvi Ibid.
xviii Waters et al
xix Sutfin et al
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xx Brown et al.
xxii Schane et al.
xxiii Sutfin, et al.
xxvi Waters et al.
xxviii Harvard et al.
xxi Koval et al.