The Addictive Behaviors and Quantitative research lab at CASAA focuses on the advancement of quantitative methodology and innovative behavioral treatment approaches with the primary focus on improving treatment and treatment outcomes for individuals struggling with addictive and unhealthy behaviors. As described in this poster, most of the research we are conducting focuses on the re-analysis of existing alcohol use disorder (AUD) treatment outcomes datasets, many of which were collected initially by CASAA investigators over the past 30 years. The advancement of science by secondary analyses of existing data is not only cost-effective, but also provides a rich source of information for answering numerous questions that were not initially conceived when the data were initially collected. Importantly, our work focuses on innovative methodological techniques, including confirmatory factor analyses, latent growth modeling, mixture modeling, and missing data techniques, many of which were not available at the time of the original studies.

## METHOD

Our research uses data collected by the Relapse Replication and Extension Project (RREP; Lowman et al., 1996), the United Kingdom Alcohol Treatment Trial (UKATT; UKATT Research Team, 2001), Project MATCH (Project MATCH Research Group, 1997), and the COMBINE study (COMBINE Study Group, 2003). The RREP, MATCH, and COMBINE studies were conducted by investigators at CASAA, including Drs. Miller, Tonigan, Waldron & Westerberg.

- **RREP.** Participants (n=563) in RREP were recruited from three research sites, including CASAA. The research participants received treatment from a variety of approaches over varying lengths of time. Follow-up assessments were conducted 6- and 12-months after entry into the trial.

- **UKATT.** Participants (n=724) in the UKATT trial were recruited from seven sites around Birmingham, Cardiff, and Leeds. The participants were randomized to 8 to 12 weeks of social behavior and network therapy (SBNT) or motivation enhancement therapy (MET). Follow-up assessments were conducted at 3- and 12-months after entry into the trial.

- **MATCH.** Participants (n=1726) in Project MATCH were recruited from treatment centers associated with nine research units across the United States, including CASAA. Participants were recruited from both outpatient (n=952) and inpatient settings (n=774) and were randomized to Cognitive Behavioral Therapy (CBT), MET, or Twelve-Step Facilitation (TSF). Participants received 4 (MET) or 12 (TSF; CBT) sessions over 12 weeks. Follow-up assessments were conducted for 12-months following treatment.

- **COMBINE.** Participants (n=1383) in COMBINE were recruited from 11 research units across the United States, including CASAA. The participants received 16 weeks of treatment in one of 9 treatment conditions, which consisted of combinations of medications (acamprosate, naltrexone, placebo-equivalents) and psychosocial interventions (Combined Behavioral Intervention (CBI) or Medication Management (MM)). Follow-up assessments were conducted at 10 weeks, 9-months, and 12-months following treatment.

## RESULTS

### Demographic characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>RREP</th>
<th>UKATT</th>
<th>MATCH</th>
<th>COMBINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender - % Male</td>
<td>58.5</td>
<td>50.2</td>
<td>49.2</td>
<td>57.8</td>
</tr>
<tr>
<td>Age – Mean (SD)</td>
<td>38.1</td>
<td>39.6</td>
<td>40.1</td>
<td>33.0</td>
</tr>
<tr>
<td>Ethnicity - % White</td>
<td>85.6</td>
<td>92.0</td>
<td>92.0</td>
<td>94.8</td>
</tr>
<tr>
<td>Mental status – % literate in relationhship</td>
<td>52.1</td>
<td>43.1</td>
<td>39.9</td>
<td>52.1</td>
</tr>
<tr>
<td>Employment status – % Full or part-time</td>
<td>37.7</td>
<td>21.3</td>
<td>21.1</td>
<td>20.4</td>
</tr>
</tbody>
</table>

Higher education equivalent was 34.7%.

### Logistic regression analyses of the Life Experiences Survey Among Individuals Beginning Treatment for an Alcohol Use Disorder

Waldron, Matthew Pearson, David Brown, Tessa Frohe, Alexander Hall, & Anthony J. O’Sickey

Life experiences such as losing employment or ending a romantic relationship are potential sources of stress, yet, relatively little is known about how specific stressors impact AUD clinical course. To understand how certain life experiences may accumulate together, the current study examined the factor structure of the Life Experiences Survey, via secondary data analysis of the RREP data. Exploratory and confirmatory factor analyses suggested a 4-factor model of 11 common life experiences provided the best fit to the data. Item loadings suggested the factor structure represented life experiences in four domains: (1) legal problems, (2) major depression symptoms, (3) employment and relationship problems, and (4) changes in hedonic activities. These domains should be examined in future studies to see their association with fluctuations in alcohol consumption during the course of AUDs. Such research could help inform treatment development by highlighting life event domains that are most influential on AUD clinical course.

### Examinining Craving from an Existential Perspective

Corey Roos, Megan Kiroouc, Matthew R. Pearson, Brandi Fink, Katie Witkiewitz

Covariates have been examined from a number of theoretical perspectives; however, research examining craving from an existential perspective is lacking. This study investigated the associations among alcohol craving, purpose in life (PIL), and craving outcomes using data from Project MATCH (N = 1726). Parallel process latent growth curve analyses indicated that higher levels of PIL and increases in PIL over time were associated with lower levels of craving and decreases in craving over time. Higher levels of craving, lower levels of PIL, increases in craving, and decreases in PIL were significantly associated with greater intensity and frequency of drinking and greater drinking-related consequences at the 12-month follow-up. Future research is warranted to examine whether increases in PIL may inoculate clients from potential relapse during craving experiences.

### Physical Pain and Alcohol Treatment Outcomes

Katie Witkiewitz, Elizabeth McMcallion, Tessa Frohe, and Megan Kiroouc

The prevalence of pain among alcohol use disorder (AUD) patients has received some attention, but few studies have examined the association between pain and AUD treatment outcomes. We examined the association between physical experiences of pain, defined by pain interference and pain intensity, as predictors of alcohol lapses and alcohol use following treatment for AUD. In addition, we examined the mediating role of negative affect on pain interference and drinking outcomes. Using data from UKATT and COMBINE we found that pain significantly predicted time-to-first drinking day and time-to-first heavy drinking day during treatment and following treatment (all p<0.01). Pain also significantly predicted heavy drinking following treatment (all p<0.05). Greater pain interference was associated with greater negative affect and increases in pain were associated with increases in negative affect. Negative affect significantly mediated the association between pain and drinking outcomes. This effect was moderated by social behavior network therapy in the UKATT. The study results of this study have important implications for AUD treatment. Clinicians and researchers should assess for pain interference and intensity as potential triggers for lapses and heavy drinking as well as the mediating role of negative affect.

### Predictors of Alcohohics Anonymous Attendance

Alexander Hall, Corey Roos, Adam Wilson, Matthew R. Pearson, Katie Witkiewitz

Client characteristics and drinking profiles for members of Alcoholics Anonymous (AA) have been of interest to many researchers. This senior honors project used MATCH data to replicate the most generally accepted finding; namely, AA attendance as positively predicted by problem severity, and utilized a Multilevel framework to examine the relationship across 5 follow-ups.

## REFERENCES


## ACKNOWLEDGEMENTS

Funding provided by NIAAA R01-AA022238 (Witkiewitz, PI) and T32-AA0018108 (McCrady, PI).