Mediators of the relationship between depression and alcohol-related harm: The role of alexithymia, impulsivity and negative reinforcement outcome expectancies

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Mediators of the relationship between depression and alcohol-related harm: The role of alexithymia, impulsivity and negative reinforcement outcome expectancies

Andrew B. McGrath & Dennis McChargue Ph.D.

Introduction

- Alcohol use and abuse is prevalent in University Students, deeply ingrained the culture (White & Jackson, 2006).
- Between 14-27% of college students have depressive symptoms and 6.5-13.8% meet diagnostic criteria (Bayram & Bilgel, 2008).
- Substance use disorders are highly comorbid with mental disorders (Compton, Thomas, Stinson, & Grant, 2004).
- Alexithymia, the inability to identify and express emotion (Taylor, 2000), is more commonly found in substance users than a healthy sample (Thorberg, Young, Sullivan & Lyvers, 2009).
- Impulsivity has been found to be related to depression and substance use. Alcohol harm increases with depression despite consumption remaining the same (Simons, 2003).
- Negative expectancies have been related to alcohol problems (Leigh & Stacy, 1993; Leigh & Stacy, 2004).
- It is hypothesized that alexithymia, impulsivity, and negative expectancies will mediate the relationship between depression and alcohol harm.

Method

- Participants were students from a large Midwestern university who broke the dry campus policy and were referred to an alcohol skills training program.
- N=373, age 17-27 (M = 18.96, SD = 0.93), Male = 62.5%.
- The majority of the sample was white 90.5%, Hispanic 3.5%, African American 1.6%, Asian American 1.4%, Pacific Islander 0.3%, Native American 0.3%, and 2.4% identified as other/Multiracial.
- The majority of the sample were freshman 63.7%, and single/never married 99.7%.
- Depression was measured using the POMS, Alcohol Harm was measured using the RAPI and AUDIT. Alexithymia measured using the Toronto Alexithymia Scale-26, Impulsivity was measured using the Barratt Impulsiveness Scale (BIS), and negative expectancies were measured using the Comprehensive Effects of Alcohol Questionnaire.

Results

- The multiple mediation model accounted for a significant portion of the variance in RAPI scores (R^2 = 0.09, p < 0.001). The path from depression to alexithymia (B [SE] = 0.51 [0.16], p = 0.01, β = 0.54), impulsiveness (B [SE] = 0.50 [0.15], p = 0.01, β = 0.51), and negative expectancies (B [SE] = 0.02 [0.01], p = 0.01, β = 0.27) were statistically significant. The path from negative expectancies (B [SE] = 3.22 [0.87], p = 0.01, β = 0.21) was significantly related to RAPI score; however, alexithymia (B [SE] = 0.05 [0.05], p = 0.42, β = 0.06) and impulsiveness (B [SE] = 0.03 [0.05], p = 0.37, β = 0.02) showed a non-significant association with RAPI score.
- Bias-corrected bootstrap results (bootstrap samples = 1000) for the indirect effects (ab) revealed a non-significant indirect effect for alexithymia (CI = 0.01 to 0.05, CI = 0.01 to 0.05) and impulsiveness (CI = 0.00 to 0.07, CI = 0.00 to 0.07). Only negative expectancies showed a significant indirect path between depression and RAPI score (β = 0.06, p = 0.02, 95% CI = 0.02 to 0.12).
- The total association or effect of depression and RAPI scores (path b: B = 0.01 [0.01], p = 0.16) was indistinct when the meditational variables were accounted for in the model, however a significant direct effect remained (path c: B = 0.37 [0.06], p = 0.05, β = 0.16). Thus, negative expectancies, but not alexithymia or impulsiveness, partially mediated the relationship between depression and RAPI score.

AUDIT

- The multiple mediation model accounted for a significant portion of the variance in AUDIT scores (R^2 = 0.13, p < 0.001). The path from depression to alexithymia (B [SE] = 0.39 [0.08], p = 0.001, β = 0.54), impulsiveness (B [SE] = 0.26 [0.08], p = 0.01, β = 0.32), and negative expectancies (B [SE] = 0.02 [0.01], p = 0.01, β = 0.27) were statistically significant. The path from negative expectancies (B [SE] = 2.50 [0.39], p = 0.001, β = 0.29) was significantly related to AUDIT score; however, alexithymia (B [SE] = 0.60 [0.35], p = 0.09, β = 0.21) and impulsiveness (B [SE] = 0.05 [0.01], p = 0.12, β = 0.06) showed a non-significant association with AUDIT score.
- Bias-corrected bootstrap results (bootstrap samples = 1000) for the indirect effects (ab) revealed a non-significant indirect effect for alexithymia (β = 0.04, p = 0.26, 95% CI = 0.01 to 0.10) and impulsiveness (β = 0.00, p = 0.28, 95% CI = 0.01 to 0.07). Only negative expectancies showed a significant indirect path between depression and AUDIT score (β = 0.06, p = 0.10, 95% CI = 0.03 to 0.15).
- The total association or effect of depression and AUDIT scores (path b: B = 0.08 [0.05], p = 0.14, β = 0.11) remained nonsignificant when the other meditational variables were included in the model (path c: B = 0.07 [0.05], p = 0.18, β = 0.10). Thus, an indirect path between depression and AUDIT score over negative expectancies, but not alexithymia or impulsiveness.

Discussion

- Overall, results provided partial support for the research hypotheses.
- Only negative expectancies partially mediated the relationship between depression and alcohol harm as measured by the RAPI.
- Despite there not being a significant bivariate relationship between depression and AUDIT, negative expectancies mediated the relationship.
- Alexithymia was not a significant contributor perhaps due the nature of Alexithymia by definition has trouble identifying emotion and thus is not aware of the urge to self medicate with alcohol.
- Impulsivity as measured by the BIS did not capture negative urgency as a construct of impulsiveness which has been found to mediate the relationship between Depression and Alcohol Harm.

References


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