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ALCOHOL USE BEHAVIOURS AND LIFE SATISFACTION: THE ROLE OF PSYCHOLOGICAL FLEXIBILITY

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Abstract

In Canada and the United States, there is currently an alcohol use disorder (AUD) crisis (Lodge et al., 2022), which necessitates the development of interventions focused on addressing the high prevalence of alcohol use. Psychological flexibility (PF) involves being consciously present in the moment and engaging in behaviours that align with personal values. Increased PF is associated with higher psychological well-being (Francis et al., 2016) and more positive addiction-related outcomes, including higher treatment adherence and fewer avoidance behaviours and cravings (Lee et al., 2015). The primary objective of this research was to examine the mediating role of PF in the relationship between daily use/alcohol use disorder symptoms and satisfaction with life (SWL). In total, we recruited 525 participants (M_{age} = 29.95 years, *SD* = 16.81 years) from undergraduate psychology classes in Canada, the general population via social media, and Prolific, a crowdsourcing tool. Participants completed an online questionnaire package that included the Comprehensive Inventory of Acceptance and Commitment Therapy (CompACT; Francis et al., 2016) to assess overall PF and subscales to measure behavioural awareness (BA), openness to experience (OE), and valued action (VA), daily/almost daily alcohol use (ASI; McLellan et al., 1992), DSM-5 criteria to assess AUD symptoms, and SWL scale (Diener et al., 1985). Overall, 89 participants reported never consuming alcohol, 31 reported consuming alcohol less than once a year, 70 reported consuming alcohol in the past year, 249 reported consuming alcohol in the past 30 days, and 72 reported consuming alcohol daily/almost daily. There were statistically significant zero-order correlations between SWLS and all aspects of PF, as well as inverse correlations between AUD and two PF subtypes, BA and OE. Two mediation analyses were conducted to examine if PF mediated the relationship between alcohol use and SWL. In the first model, the CompACT subscales did not mediate the relationship between daily alcohol use and SWL. In the second model, two dimensions of PF, VA (B = -0.0298, 95% CI -0.0555 to -0.0041) and OE (B = -0.0370, 95% CI: -0.0626 to -0.0115) partially mediated the relationship between self-reported AUD symptoms and SWL. These results highlight the mediating role of aspects of PF, specifically VA and OE, in the relationship between AUD and SWL. Interventions that focus on enhancing openness to both positive and negative experiences and focusing on personal values could help individuals with AUD maintain higher life satisfaction.

Keywords: *Alcohol use disorder, psychological flexibility, satisfaction with life.*

1. Introduction

In Canada and the United States, there is currently an alcohol use disorder (AUD) crisis (Lodge et al., 2022); In 2017, approximately 140.6 million Americans aged 12 and older were current alcohol users with 66.6 million considered as binge drinkers and 14.5 million meeting the criteria for an AUD (Substance Abuse and Mental Health Services Administration., 2018), with one third of Americans expected to meet the criteria for AUD at one point in their life (Ignaszewski, 2021). Likewise, during COVID-19, approximately 25% of Canadians self-reported increased alcohol consumption due to boredom, schedule changes, and stress, while 12% reported excessive alcohol consumption when drinking (Canadian Centre on Substance Use and Addiction, 2021). Psychosocial factors have been shown to be the core of AUD treatments, such that self-efficacy and goal alignment are said to be key components for predicting AUD treatment and recovery (Paquette et al., 2022).

Life satisfaction is an individual assessment of one's life and focuses on the subjective comparison between current circumstances and the standard which one considers is ideal for themselves (Diener et al., 1985). Many factors that affect life satisfaction include psychological features, gender, age, lifestyle, and leisure satisfaction (Proctor et al., 2017). Furthermore, life satisfaction is a key indicator for mental health

and is positively connected to positive personal, psychological, behavioral, interpersonal, intrapersonal, and social outcomes, as well as positive physical health outcomes, including fewer chronic health conditions, and less physical functioning limitations (Proctor et al., 2017).

AUD brings about a variety of problems including loss of social or familial relationships, run-ins with the law, and health related problems (Ignaszewski, 2021). Therefore, it's not surprising that studies have shown the negative impacts that AUD has on one's satisfaction with their life. Research suggests that patients with a current AUD report a lower overall health related quality of life and satisfaction with life (Proctor et al., 2017). Given the effects of AUD on different life domains, the assessment of life satisfaction in individuals with AUD is important because it allows for an understanding of how excessive/problematic alcohol use impacts one's evaluation of their life in multiple domains.

Psychological Flexibility. The CompACT scale was developed to assess psychological flexibility in terms of three dyadic processes defined as: (1) "Openness from experience and detachment from literality" (defusion; acceptance); (2) "perspective taking and self-awareness" (self as context; present moment awareness); (3) "motivation and activation" (committed action; values) (Francis et al., 2016). Therefore, the three factors of the CompACT (i.e., behavioural awareness (BA), openness to experience (OE), and valued action (VA)) correspond to these processes (Francis et al., 2016). BA can be defined as the ability to focus one's attention intentionally, paying attention to the present moment, and shifting attention when required. To do this effectively, one must be aware of their behaviours and the effects (McCracken, 2024). OE can be defined as the ability to accept different outcomes or feelings, both positive and negative. This could be the willingness to accept pain, fear, anxiety, sadness, or negative life events that are out of our control. To do this, one must refrain from avoidance behaviours and embrace the idea that all experiences foster growth and maturity (McCracken, 2024). VA can be defined as the ability to clarify one's goals and values and act in accordance with them by engaging in behaviours that support and promote them. This involves initiating actions that align with one's goals and values (McCracken, 2024).

Psychological Flexibility and Alcohol Use Behaviours. Psychological flexibility (PF) is the capacity to persist or change one's behaviour to be open and accepting of personal thoughts and feelings, to appreciate and adapt to different situations, and respond to situations that facilitate one's personal values and goals (McCracken & Morley, 2014). PF has been shown to mediate important therapeutic outcomes, such that higher PF is associated with lower psychological distress and higher life satisfaction (Francis et al., 2016). In individuals with AUD, PF provides alternatives to maladaptive coping strategies, as well as decreasing attempts to control or avoid distressing internal experiences, such as cravings (Lee et al., 2015). Interventions targeting PF have demonstrated significant improvements regarding AUD-related outcomes, such as higher adherence to treatment, fewer avoidance behaviours, and less cravings (Lee et al., 2015).

The Current Study. Although there have been various studies investigating the role of PF in psychological disorders, few studies look at psychological flexibility on disordered alcohol use and life satisfaction (Masuda & Tully, 2012), therefore, it is important to explore this gap in the literature. Thus, the purpose of the current study is to examine the role of the pillars of PF, specifically OE, BA, and VA, in disordered alcohol use behaviours and life satisfaction. It is hypothesized that individuals who score higher in PF will score higher on life satisfaction and will be less likely to engage in disordered alcohol use behaviours.

2. Method

2.1. Participants

A total of 525 participants were recruited; 271 undergraduate students were recruited through SONA; an online research recruitment portal, 111 community participants were recruited via social media postings, and 143 participants were recruited through Prolific-an online recruitment service. In total, there were 331 women (M_{age}=27.86, SD=13.96), 173 men (M_{age}=32.62, SD=14.51), 9 non-binary, 8 trans, 1 two-spirited, 2 identified as another gender not listed, and 1 participant preferred not to answer.

2.2. Materials

The Addiction Severity Index (ASI; McLellan et al., 1992) was administered to assess the frequency of alcohol use. Participants used a 5-point scale, ranging from never to daily/almost daily, to rate their substance use. This scale demonstrates a strong test-retest reliability and high internal consistency (α = .84). *The DSM-5 Substance Use Criteria* (American Psychiatric Association, 2013) assessed problematic past year alcohol use. The scale uses a checklist (yes/no) to allow participants to indicate if they experience symptoms associated with substance misuse (i.e., craving, tolerance, withdrawal, etc.). The scale includes 12 items associated with problematic alcohol use (e.g., "do you experience mental and/or physical discomfort when sober?"), with higher scores indicating greater alcohol use severity. *The*

Satisfaction with Life Scale (SWLS; Diener et al., 1985) is a five-item measure on a seven-point Likert scale from strongly disagree to strongly agree (e.g., "I am satisfied with my life"). This scale has been shown to have good internal consistency and reliability (α = .90) (Diener et al., 1985). *The Comprehensive Inventory of Acceptance and Commitment Therapy* (Francis et al., 2016) is a 23-item measure with three subscales: (1) Openness to Experience (OE; e.g., "I work hard to keep out upsetting feelings"), (2) Behavioural Awareness (BA; e.g., "I find it difficult to stay focused on what's happening in the present"), and (3) Valued Action (VA; e.g., "I behave in line with my personal values"). The scale has excellent internal consistency for the total (α = .91), and subscale scores (α= .84 for OE, α= .89 for BA, and α= .90 for VA; Ong et al., 2020).

2.3. Procedure

Prior to data collection, this research was reviewed by the Research Ethics Board at the University of New Brunswick (REB 2024-153). Participants accessed the online survey on Qualtrics. After providing informed consent, participants completed the questionnaire package. The demographics questionnaire was always presented first, followed by the questionnaires presented in random order. After reading a debriefing form, participants could provide their email to receive an incentive.

3. Results

Alcohol Addiction Severity Index. Overall, 89 (17.4%) participants reported never consuming alcohol, 31 (6.1%) reported consuming alcohol less than once a year, 70 (13.7%) reported consuming alcohol in the past year, 249 (48.7%) reported consuming alcohol in the past 30 days, and 72 (14.1%) reported consuming alcohol daily/almost daily. We used *t*-tests to assess the effects of daily alcohol use on psychological outcomes (see Table 1). Overall, daily alcohol users had significantly lower SWLS scores and higher DSM symptom scores. Interestingly, with the exception of CompACT: BA, there were no differences in PF for daily and non-daily alcohol users.

Table 1. Differences in the mean (standard deviation) for daily vs. non-daily alcohol users.

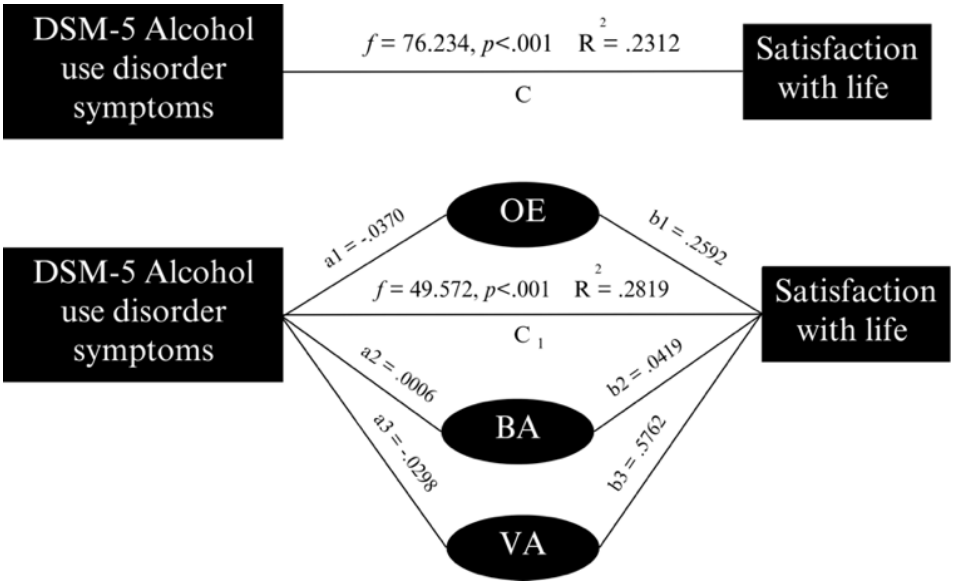
	Daily Alcohol Use		***t*(*p*)**	**Cohen's *d***
	No (*n*=439)	**Yes (*n*=72)**		
SWLS	4.44 (1.41)	4.06 (1.73)	1.74 (.043)	1.46
CompACT-Total	3.35 (0.83)	3.49 (0.89)	-1.34 (.09)	0.84
CompACT-Openness to Experience	2.82 (1.04)	2.97 (1.10)	-1.09 (.138)	1.05
CompACT-Behavioural Awaremess	2.99 (1.29)	3.35 (1.28)	-2.19 (.014)	1.29
CompACT-Valued Action	4.24 (1.06)	4.24 (0.99)	-0.016 (.493)	1.05
DSM Symptoms	1.88 (3.18)	6.11 (3.30)	-10.39 (<.001)	3.20
Age	27.05 (12.48)	43.81 (15.10)	-10.22 (<.001)	12.88

Note. *For SWLS, equal variances were not assumed.*

There were statistically significant zero-order correlations between SWL and all aspects of PF, CompACT: Total $r(503) = .469$, $p<.001$; CompACT: OE, $r(503) = .336$, $p<.001$; CompACT: BA, $r(503) = .232$, $p<.001$; and CompACT: VA, $r(503) = .482$, $p<.001$, as well as inverse correlations between AUD and CompACT: Total, $r(503) = -.117$, $p<.001$; CompACT: OE, $r(503) = -.130$, $p<.001$, and CompACT: VA, $r(503) = -.105$, $p<.001$. Although daily alcohol use was weakly associated with CompACT: BA, $r(503) = .097$, $p<.001$, daily use was not correlated with other aspects of PF. The correlation between self-reported AUD symptoms and SWLS was statistically significant, $r(503) = -.156$, $p<.001$. Likewise, the correlation between self-reported AUD symptoms and SWL, when controlling for all aspects of PF, was also shown to be statistically significant, $r(503)= -.108$, $p=.007$.

To examine if PF mediated the relationship between alcohol use and SWL, two mediation analyses were conducted using Hayes PROCESS module. The three pillars of PF, CompACT: OE; CompACT: BA; CompACT: VA, were entered as mediators in the relationship between daily alcohol use and SWL for model 1 and between self-reported AUD symptoms and SWL for model 2. For model 1, the indirect effects of CompACT subscales were not statistically significant and thus, did not mediate the relationship between daily alcohol use and SWL; In model 2, the indirect effect of CompACT: VA (B = -0.0298, 95% CI -0.0555 to -0.0041) and OE (B = -0.0370, 95% CI: -0.0626 to -0.0115) were statistically significant and therefore, partially mediated the relationship between self-reported AUD symptoms and SWL (see Figure 1).

Figure 1. Mediation analysis of psychological flexibility subtypes on DSM self-reported AUD symptoms and life satisfaction.



4. Discussion

In the current study, although there were zero-order correlations between PF and SWL, PF did not mediate the relationship between daily/almost daily alcohol use and SWL. Interestingly, two aspects of PF, VA and OE, partially mediated the relationship between self-reported AUD symptoms and SWL. These results are consistent with previous findings, such that habitual drinking does not seem to have severe detrimental effects on one's working memory, inhibitory control, and cognitive flexibility, in the absence of an AUD; however, research suggests that these cognitive processes are impaired in individuals suffering from an AUD (Bensmann et al., 2019). Therefore, higher PF, especially OE and VA, affects life satisfaction for individuals suffering from an AUD, but not for individuals who drink alcohol daily/almost daily without meeting criteria for an AUD. There were some limitations of this study that should be noted. First, the sample only consisted of individuals residing in North America, thus, reducing the generalizability of the study. Furthermore, we did not use a clinically diagnosed sample and instead, relied on self-report measures to assess AUD symptoms, therefore, we cannot directly imply that individuals who scored high on AUD symptoms have a clinically diagnosed AUD. Finally, the correlations were weak (but significant), which was likely, at least in part, due to these limitations. Therefore, future studies should address these limitations through the incorporation of a more generalizable sample and/or a clinical sample of individuals with AUD, which would likely yield a stronger relationship.

5. Conclusion

Disordered alcohol use impacts all aspects of one's life including occupational, family and interpersonal relationships, and physical health; however, despite these well-known consequences in the general population, only a small proportion of individuals who meet diagnostic criteria for AUD seek treatment (Ignaszewski, 2021). Research has shown that acceptance and commitment therapy can lead to increases in PF that can foster the reduction of alcohol use behaviours by encouraging individuals suffering from AUD to accept their inner selves and develop adaptive behaviours that align with their values, rather than resorting to avoidance behaviours (Albal & Buzlu, 2021). This study further supports the past research by highlighting the mediating role of aspects of PF, specifically VA and OE, in the relationship between AUD and SWL and provides further evidence that interventions that focus on enhancing openness to both positive and negative experiences and focusing on personal values could help individuals with AUD maintain higher life satisfaction.

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