




**Declaration of interests**

None.

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**ALCOHOL: A PROBABLE RISK FACTOR OF COVID-19 SEVERITY**

COVID-19, a current pandemic, has contributed to many fatalities world-wide. Sepsis, respiratory failure and acute respiratory distress syndrome (ARDS) have occurred in most fatal cases [1].

Several clinical factors have been demonstrated as risk factors of COVID-19 severity and death [1,2]. Among modifiable health risk factors, smoking has been given special attention along with clinical factors. A systematic review conducted recently has already identified five studies exploring the effects of smoking on severity of COVID-19 [3]. The World Health Organization (WHO) has particularly emphasized the vulnerability of smokers to

COVID-19 [4,5]. Obesity, another modifiable risk factor, has also been investigated with emerging evidence of an association [6,7]. Obesity is closely related to two behavioural risk factors—poor diet and lack of physical activity [5]. Alcohol consumption has not been granted much attention, although several studies have reported that alcohol consumption increased the risk of ARDS in patients with critical conditions and the admission to intensive care unit (ICU) in patients with pneumonia [8–10]. At the time of writing, to our knowledge, no published study exploring the risk factors of disease severity in COVID-19 patients has included alcohol consumption as a covariate.

An independent effect of ‘chronic alcohol abuse’ on ARDS in critically ill patients has been demonstrated in a prospective cohort study [8]. A recent systematic review and meta-analysis found that any measure of high relative to low alcohol consumption was associated with a significantly increased risk of ARDS [odds ratio (OR) = 1.89; 95% confidence interval (CI) = 1.45–2.48] [10]. Alcohol can increase the risk of developing ARDS through various mechanisms, including alveolar epithelium dysfunction, alcohol-induced oxidative stress and interference of alveolar macrophage function [11]. In hospitalized patients with pneumonia, having an alcohol-related diagnosis was associated with greater likelihood of admission to ICU (OR = 1.63) and longer length of stay (adding an extra 0.6 days) [9]. Chronic alcohol consumption can induce cilia dysfunction in airways that reduces their ability to clear bacteria and virus [11].

These effects of alcohol consumption have important implications for the management of patients with COVID-19. History of alcohol use could be an important predictor for disease severity and ICU admission, and could contribute to treatment strategy for COVID-19 patients with chronic alcohol consumption and alcohol use disorders (AUDs). Therefore, the role of alcohol consumption on severity of illness in patients with COVID-19 should be explored, and a history of alcohol consumption should be included as a probable risk factor of disease severity in COVID-19 studies.

It will be valuable to see more attention paid to this issue by health authorities, researchers and practitioners with warnings being given on the probable effects of alcohol consumption in relation to COVID-19.

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**Udomsak Saengow:** Conceptualization; investigation. **Sawitri Assanangkornchai:** Conceptualization. **Sally Casswell:** Conceptualization.

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## CRAFT: Treatment integrity is imperative for understanding research findings

Archer *et al.* [1] address an interesting and challenging perspective on the cumulating CRAFT literature to target

treatment components and participant characteristics. During the late 1970s, CRAFT was originally created by R.J. Meyers in the United States and initially tested by Sisson and Azrin [2]. Since the seminal CRAFT review [3], we sincerely welcome this thorough update by an independent British research group. Confirming our previous work, the main finding is that CRAFT is superior to multiple control conditions.

However, a striking discovery is that Canadian studies on pathological gambling consistently yielded poor outcomes. As such, it is suggested that these studies may be limited because the negative consequences of gambling behaviors may be more difficult to identify. It might be tempting to distinguish on the addiction-type, but construct overlap between pathological gambling (i.e. gambling disorder) and substance use disorders exists in terms of diagnostic, clinical, physiological, and behavioral domains [4], meanwhile grouped together in the DSM-5.

Next to these aspects, the authors deciphered that “... through training and supervision for therapists” might be a key element. Indeed, the CRAFT developers [5] advocate attending a full-length certified workshop and long-term supervision by CRAFT specialists to avoid compromising treatment effects. Because it has been established that therapy-drift often occurs [6], it is critical that therapists are subject to ongoing supervision [7].

In several included original CRAFT papers [1], it is stated that treatment adherence was secured by e.g. providing CRAFT literature and clinically experienced or certified (behavioral) therapists. However, patient-outcome is, at best, only modestly related to therapist experience [8]. Solely reading books also appear to be ineffective in gaining therapeutic proficiency [9]. CRAFT works unilaterally through concerned significant others (CSOs), and often, complex dilemmas regarding CSOs and their families emerge, requesting ongoing expert-feedback. Hence, as Miller says: “...trying to master a new treatment without feedback or coaching is like reading about and attending a lecture on golf then practicing swings blindfolded.” [10], p 36.

Guarding treatment accuracy is important to credit outcomes unambiguously to treatment protocols, to prevent a Type 2 error. Moreover, research groups who conduct intervention outcome testing should comply with adequate integrity procedures to obtain a sufficient level of rigor [11]. The Canadian gambling studies created their own self-help workbook [12,13], partially based on a CSO focus group, but without consulting the CRAFT inventor and before the original books were available. Notably, one of those CRAFT books [5] is a top-selling book for gambling therapists.

It is alarming that several research groups, especially outside the United States, fall short to acknowledge the