

# Alcohol, Liver Disease and Violence a Brief and Preliminary Scoping Literature Review

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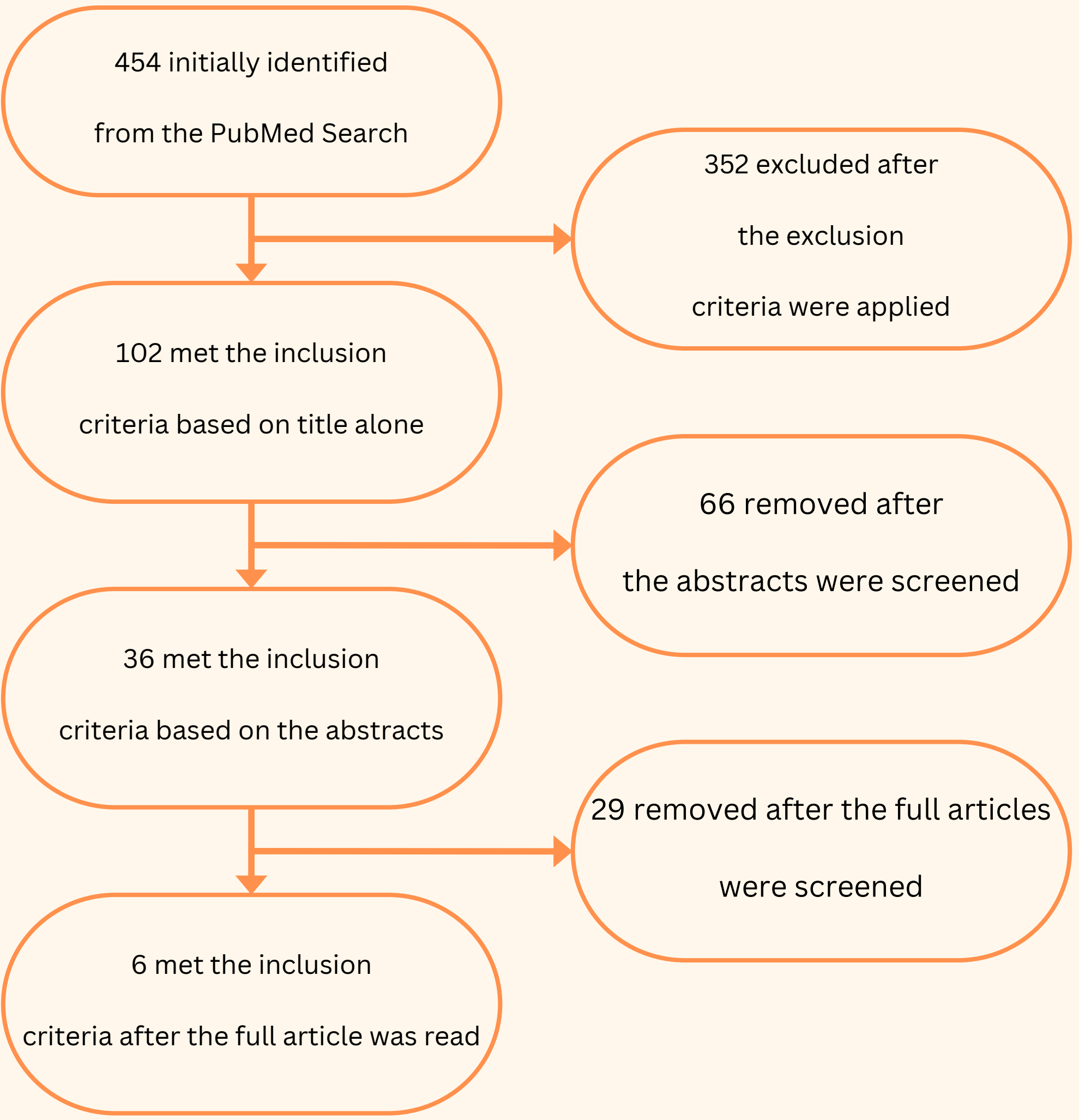
**Introduction & Aims:** Alcohol consumption is widely recognised to be associated with an increased risk of violence (assault, homicide, suicide, interpersonal violence)[1]. It is estimated that alcohol consumption is associated with violence in up to 40% of cases [1]. Additionally there is a widely recognised and well documented association between increased alcohol consumption and liver disease including alcohol liver disease (ALD),hepatitis, malignancy as well as cardiovascular disease[2]. However there appears to be limited evidence published in the association of alcohol, liver disease and violence. The aim of this brief scoping review is to identify if there is data already published in the role of liver disease and violence and to determine if this is a feasible and worthwhileliterature review and meta-analysis.

**Results:** A total of 454 studies were initially identified to fit the search criteria. This was reduced to 102 after excluding criteria were applied. This was further reduced to 36 after the abstracts were read. From the remaining 36, one was excluded as it was not in English, and a further 29 were removed as they did not publish data on alcohol and liver disease associations with violence. This resulted in six articles being included in this brief scoping review. All six papers included were country-specific.

Three of the studies looked at mortality outcomes, two looked at the association of interpersonal violence and liver disease caused by alcohol and one study focused on the role of ambient violence on alcohol consumption and liver disease. Sahlman et al. looked at the incidence of Finnish ALD patients requiring hospitalisation and their survival over a ten-year period [3]. They identified that there was a higher than expected proportion of patients who died from accidents and violence, assault and suicide[3]. They showed that ALD patients were at increased risk of violence [3]. Geldenhuys et al. looked at 124 cadavers in Cape Town, South Africa, and found that 12/124 (9.7%) had evidence of ALD and skull fractures typically seen in interpersonal violence[4]. Singh et al. showed that 34% of hospitalised male ALD patients in eastern India were found to have abused their spouse, 20% suffered accidents and 37% were involved in physical violence, again showing a correlation between ALD and violence [5] Crane et al. analyses showed that there was a marginally statistically significant association between interpersonal violence and conditions related to liver disease and hepatitis when comparing alcohol use disorders (AUD) to non AUD participants[6].

Andreasson et al. carried out a validation of previous prediction models of a Swedish population following changes to the national alcohol policy[7]. They found that assault and accident estimates were closely matched to the actual outcomes, but homicide, suicide and alcohol related mortality predicted were higher than the actual numbers [7]. They estimated that future tax changes that would result in making alcohol cheaper to purchase would lead to an increase in alcohol consumption and thus increase alcohol related mortality (including liver disease and malignancies), accidents, suicides and homicides, as well as increase the number of assaults and lead to a total increase of sickness absence days [7]. Das et al. carried out a study in Mexico, which highlighted that ambient violence (homicides) was associated with an increase in deaths associated with ALD, this was likely attributed to psychological stress and harmful coping mechanisms [8].

**Methods:** A scoping literature search strategy was developed to look at publications with adult with alcohol use disorder and liver disease and violence. Inclusion criteria included all types of publications including literature reviews, case reports and government reports, participants with co-occurring mental illness were also included, additionally there was no restriction on geography. Exclusion criteria included papers not in English, not adult population and not focused on our research topic (alcohol, liver disease and violence). Pubmed database was searched only as this was a feasibility review. The search was limited to the last 20 years.



**Conclusions:** From this brief scoping review there is evidence that there appears to be a correlation between violence and liver disease as expected given the well-known and recognised link of alcohol and violence and alcohol and liver disease. This brief review has highlighted the role of ambient violence on alcohol consumption and the liver disease and the limited data available on that relationship. Additionally, many of the studies included did not define if the violence was carried out by or targeted towards the participants, raising a new issue that those with alcohol use disorders are at increased risk of being victims of violence and not just perpetrating it. As a feasibility study this has been successful as it has shown that there is data available

**Future Work:** A full literature review and meta-analyses on the role of alcohol, liver disease and violence could be carried out using a broad range of suitable databases. Additionally, a scoping literature review on the role of ambient violence on alcohol consumption could be carried out.

**References:**  
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