Integrating theories of alcohol consumption: how do drinking motives influence HAPA self-efficacy?

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MMAU and HAPA:

- A cross-sectional pilot study to investigate integration of the Motivational Model of Alcohol Use (MMAU) with Health Action Process Approach (HAPA)
- Socio-cognitive models are used to examine drinking behaviour

Source: Schwarzer, 2008; Renner et al., 2008; Cox & Klinger, 1988; Cooper, 1995; Veich, 2015
Why integrate MMAU with HAPA?

- **MMAU**: Motivation to consume alcohol to regulate positive and negative emotions
  - Prominent variables: Drinking motives - The final reason to drink or not. activated just prior to actual drinking event, positively related to alcohol consumption

- **HAPA**: Motivation to change drinking behaviour and consume less alcohol
  - Prominent variable: Self-efficacy - an optimistic belief in one’s ability to perform a task before commencing the behavior. High levels of self-efficacy related to lower levels of alcohol consumption

- Still substantial variance in drinking behaviour unaccounted for (+- 70%)

*Source: Schwarzer, 2008; Renner et al., 2008; Murgraff, McDermott & Walsh, Oei et al., 2005 2003; Cox & Klinger, 1988; Kuntsche & Kuntsche, 2009, Bandura, 1977; Luszczynska, Mazurkiewicz, Ziegelmann, & Schwarzer, 2007*
What was the aim of the study?

- Investigate how motivational factors that cause people to drink (drinking motives), interact with motivation to drink less (self-efficacy).
- Increase understanding of drinking behaviour and reduce unexplained variance in statistical models.

Motivation to drink + Motivation to live healthily = ?
Why is this research important?

- Risk of immediate alcohol related injury: *Motor vehicle accidents* *Aggression* *Family violence*
- The cumulative effects of alcohol have been linked to chronic diseases such as: *Cardiovascular disease* *mouth* *throat* *liver and breast cancer*
- Latest figures from ABS indicate over 189 million litres of pure alcohol available for consumption
- Drinkwise suggests Australians drinking at healthier levels and underage drinking decreasing
- Further research needed to identify psychosocial determinants that indicate why some individuals drink at healthier levels than others.

Source: National Health and Medical Research Council (NHMRC), 2009; Australian Bureau of Statistics (SABS), 2016; Drinkwise Australia, 2017
How was data collected?

- A convenience sample of 405 adults were recruited on a vehicular ferry in Southern Queensland.
- The data were collected using self-report questionnaires.
- The study was a cross-sectional design.

Key variables:

- **Self-efficacy**: Alcohol Resistance Self-efficacy Scale (*Alpha* = .80).
- **Drinking motives**: 3 Item drinking motive measure (*Alpha* = .76).

Kuntsche & Kuntsche, 2009; Cooper, 1994; Cox & Klinger, 1988; Schwarzer & Renner, 2014
Results – All hypothesis supported

398 surveys were retained for analysis. Data ranged from non-drinkers to heavy drinkers (+10 standard drinks daily) with 59% being male.

MMAU: Enhancement drinking motives were positively related to drinking behaviour. \((r = .51)\)

HAPA: Self-efficacy was negatively related to drinking behaviour \((r = -.4)\).
Drinking motives were negatively related to self-efficacy – That is, as motivation to drink alcohol increased, belief in one’s ability to drink less alcohol decreased ($r = -.39$)

- Alcohol makes me feel great…. Therefore I don’t believe I could ever reduce my alcohol intake
- Alcohol makes me feel quite good… therefore I think I could reduce my alcohol intake most of the time
- Alcohol doesn’t really make me feel good therefore I believe that I could easily reduce my alcohol intake
Results: Mediation

Hayes Process Model 4 suggested Self-efficacy mediated the relationship between drinking motives and drinking behaviour. This implies an indirect effect in addition to the direct effect.

Motives had a positive effect on drinking behaviour and a negative effect on self-efficacy. This represented a medium effect ($k^2 = 9\%$).

Total model summary accounted for 30.5\% of variance in drinking behaviour.

Standardized indirect effect: $\beta = .08$, 95\% CI [0.05, 0.13]

Direct effect:

- $b = 3.79$, $t = 9.45$, $p < .001$

Total effect:

- $b = 4.54$, $t = 11.93$, $p < .001$

Drinking Motives$\rightarrow$Self-Efficacy$\rightarrow$Drinking Behaviour
What have we contributed to research?

- Strong Motivation to drink suggests a suppression of self-efficacy
- Self-efficacy suggests lower levels of drinking over and above motives
- Increased motivation to drink suggests increased drinking because of the negative effect on self-efficacy

What’s interesting?

- High levels of self-efficacy as well as high levels of motivation to drink can occur
- Drinking motives are activated by cues to drink; their influence on self-efficacy is sporadic
- A change in the situational frame, changes motives, resulting in self-efficacy being differently effective

Source: Ralston & Palfai, 2010; Oei et al., 2005
Where to next?

► This pilot study was limited by the cross-sectional design.

► However, the drinking motives / self-efficacy relationship explained 30.5% of variance in drinking behaviour and highlighted the potential of integrating MMAU and HAPA.

► Results suggested a reduction in drinking motives and improvement in self-efficacy could be beneficial in reducing drinking behaviour.

► The development of clinical tools to encourage these behaviours could be beneficial.

► Research findings from the present study were used to develop a preliminary, interactive questionnaire to examine this concept.

► The form is demonstrated in the following slide:
### Alcohol Replacement Plan

Please answer the following questions:

If you wanted to reduce your alcohol consumption, how sure are you that you can begin to drink less?

I am very sure I can force myself to...

- stop drinking completely
- limit my alcohol consumption
- drink only on special occasions

What are your reasons for drinking alcohol?

I drink alcohol because:

- I enjoy drinking alcohol

Self-efficacy: 0
In addition to measuring self-efficacy and drinking motives, the drinking motive items were utilised as a mechanism to identify alternative activities to help individuals cope with drink urges.

This sample tool has shown potential in helping individuals reduce alcohol consumption by engaging in alternative activities.

Future research could build on this concept by identifying methods to further reduce drinking motives and enhance self-efficacy.

Larger longitudinal studies using more comprehensive tools and additional HAPA variables would be necessary to fully investigate the implications of this study.

Source: Dolan, 2013; Schwarzer, 2008; Renner et al., 2008; Oei et al., 2005 2003; Kuntsche & Kuntsche, 2009
Any further enquiries?

For any further questions, please feel free to contact Denise Girdlestone at:

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