



A Qualitative Study of Volunteers' Awareness of the Acute Effects of Ethanol on Speed and Accuracy of Performance

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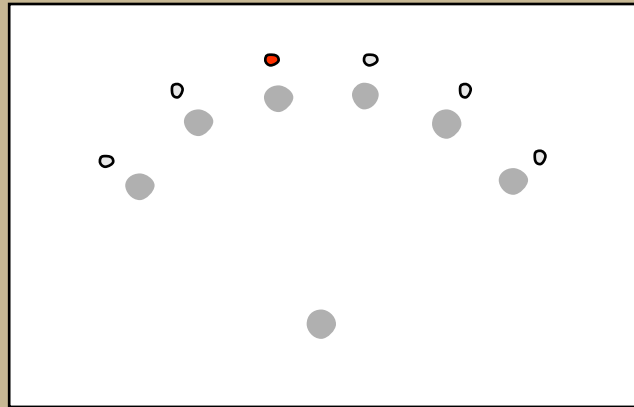
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Speed and Accuracy

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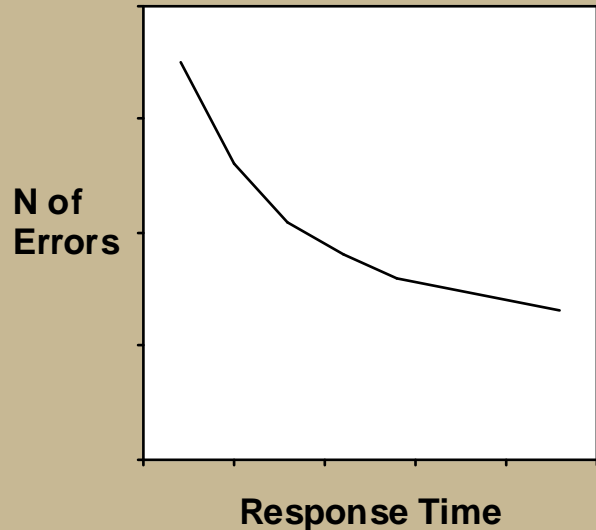


Speed and Accuracy

- There is a trade-off between speed and accuracy
- Faster performance is associated with more errors
- Slower performance is associated with fewer errors

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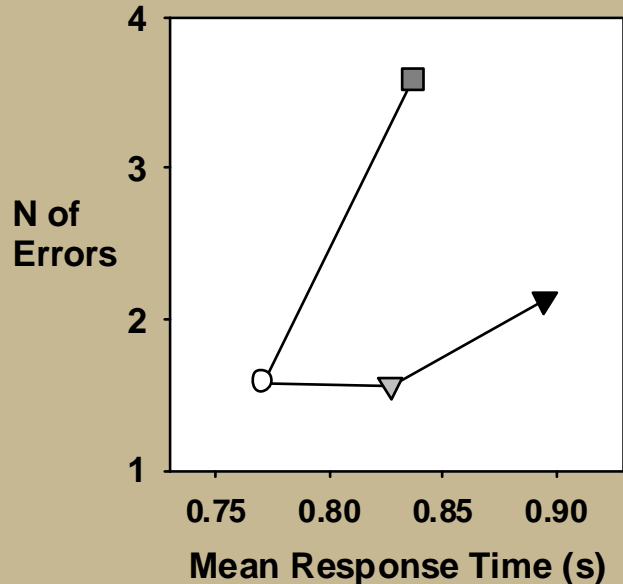
Speed-Accuracy Trade-off

- Inter-individual differences
- Instruction set
- Feedback or pay-offs
- How the person construes the task

It is essential to take both speed and errors into account when interpreting test results

Speed-Accuracy Trade-off

- Speed and errors may be differentially affected by drugs
- Sedative drugs tend to slow performance
- Alcohol has greater effect on errors



Alcohol and Errors

Doesn't seem to be due to:

- Impaired error processing
- Alcohol myopia
- Increased willingness to take risk

Alcohol and Errors

Volunteers know:

- They are making errors
- They are making more errors with alcohol

Are they making conscious decisions about errors and about SATO?

Are these decisions affected by alcohol?

Alcohol Study

- A hybrid everyday/laboratory study using mobile phones for performance testing
- Laboratory part compared alcohol (mean peak BAC 121 mg/100 ml) and placebo in two-period crossover
- 30 healthy volunteers (16 M 14 F) aged 19-64 years (mean 37.4) took part
- Qualitative interviews carried out at end of second session

Performance Tests

- Word-Number: Episodic memory
- Memory Scanning: Working memory
- Number-Pair: Attention/Psychomotor

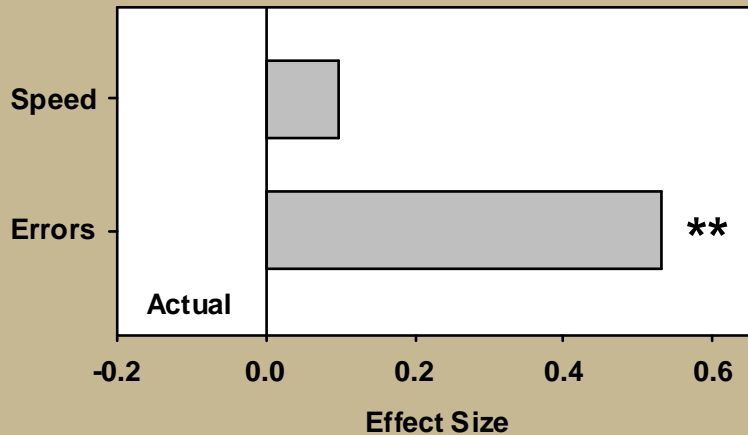
Performance Tests

- Word-Number: Episodic memory
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- Number-Pair: Attention/Psychomotor



Number-Pairs

- Significant increase in errors with alcohol
- Small, non-significant slowing of response time

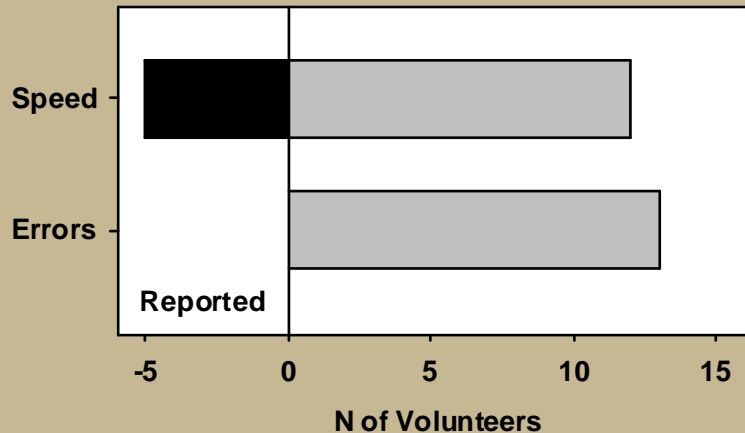


Qualitative Interviews

- Approach to tests, strategies
- Awareness of performance
- Responses to errors when they occurred
- Attitudes concerning speed and errors
- Awareness of SATO
- Awareness of alcohol effects on test performance
- Attitudes to alcohol in everyday life

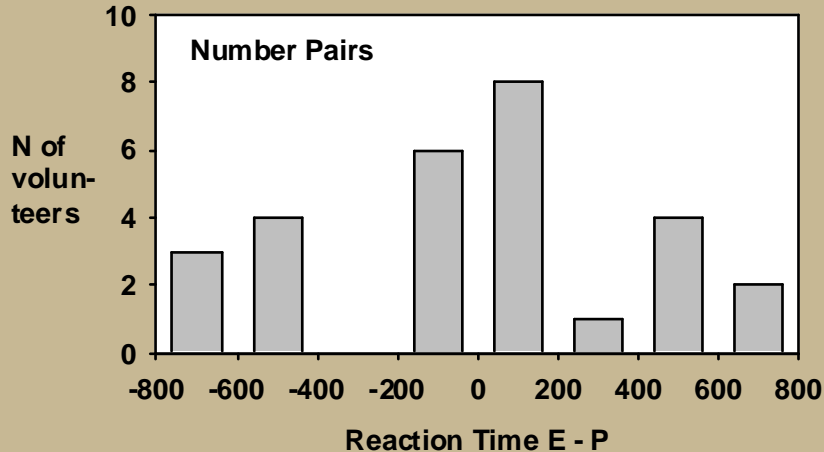
Awareness of Performance

- 22 / 30 volunteers were aware of alcohol impairment to at least one aspect of performance



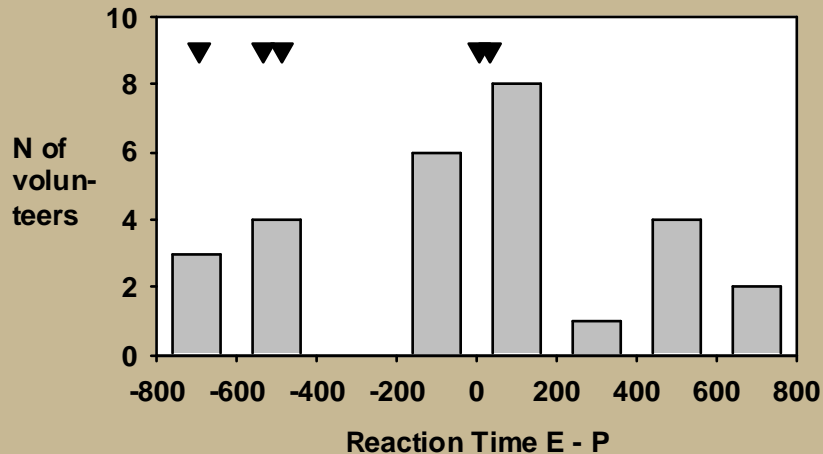
Awareness of Performance

- Five volunteers said they sped up with alcohol



Awareness of Performance

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Awareness of Performance

- 26/30 volunteers were explicitly aware of the inverse relationship between speed and errors
 - “More errors because I was going more quickly”
 - “Better going slower making fewer errors”
 - “I try and avoid error rather than be fast”
 - “Take time, could do it without errors, no bother”
 - “If I’d been slower, I wouldn’t have made the mistakes”
- Five volunteers reported consciously slowing down (or trying to) with alcohol to avoid making more errors

Alcohol Themes

- Concentration impaired
- Less conscientious
- Try harder or slow down to compensate for effects of alcohol
- Over-confidence or dissociation

Concentration Impaired

- Kind of get a bit hazy, weren't as switched on
- Lack of concentration
- Concentration span less
- Needed to concentrate
- Alcohol stops you concentrating
- I focussed less, my concentration was less
- My concentration was poor
- I was losing concentration

Less Conscientious with Alcohol

- I didn't take the task so seriously
- I didn't care as much
- Care less if you got it right- just wanted to get test over
- If I get it wrong I don't react with the same vigour as when I'm sober
- I didn't care so much
- Can I actually be bothered to get all these right?
- More relaxed about it all, less conscientious
- It doesn't make the errors seem so important

Trying Harder to Compensate for the Effects of Alcohol

- Have to concentrate harder
- Trying to keep the same pace [...] still wanted to do as well as I could
- I'm a bit drunk and need to like slow and think about it properly
- I really focussed on it more
- You're thinking about it and concentrating more
- Still trying to get it right as possible
- I tried to slow myself down when I'd had the alcohol
- I slowed down definitely, but I still made more errors

Over-Confidence or Dissociation

- Sense of confidence, you feel that anything you do drunk is valid
- It pushes behaviour to extremities, either misplaced self-confidence or more aware of impairment
- I felt I was doing better but I think I was doing worse
- You think you're wonderful but you're absolute rubbish
- If you've had alcohol you try and pretend [to yourself] you don't have

Thematic Development

- Themes fragmented, and to some extent conflicting
- Different people react to alcohol in different ways
 - Personality
 - Stimulant vs sedative effects

Development of questionnaire to collect more systematic data on different responses to alcohol



Acknowledgements

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Questions?