Moderate Alcohol Consumption and Health: A Comparative Analysis
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Messaging Model

- Background
- Bottom Line
- Explanation
- So What
- Call To Action
Background

Wine makers and other alcohol industries marketing health benefits of MAC (Bierbaur, 1999).

Figure 1. Most studies report J-shaped curves, whereby light to moderate drinkers have less risk than abstainers, and heavy drinkers are at the highest risk (O'Keefe, Bybee & Lavie, 2007).
Significance of the Study

- Can serve as a model to qualitative evaluators who are interested in the grounded theory approach.
- 2) It adds to the scarcely used Fourth Generation Evaluation (FGE) approach coined by Lincoln and Guba (1989).
- 3) It adds knowledge to evaluation of substance abuse prevention and treatment programs.
Literature Review

Proponents of health benefits of MAC

- U or J-Shape relationship between MAC and total mortality from CVD and its risk factors (Gaziano et al., 2000; Ajani et al., 2000; Costanzo, 2012, Mukamal et al., 2010).
- French paradox (Wine) ((Ferrières, 2004; de Lorgeril et al., 2002)
- Cause and effect (ethanol) Brien et al., 2011
- Vasodilation effects
- Antitrombotic effects
- Effects on strokes (ischemic) (Ronskley et al., 2011)

Opponents' arguments

- Discrepancies /skepticism (Shaper et al., 1998; Filmore et al., 2007)
- Referent group (sick quitter)
- Misclassification error/confounders
- Definition (Dufour, 1999)
- MVC at low BAC (Heng et al., 2006)
- Carcinogenic (Boyle and Levin, 2008; Zaridze et al., 2009)
- Greater risk of hemorrhagic strokes
- Self report data
- Reverse causation (which comes first).
Random Segregation of Alleles

Exposure: one Allele
Control: other Allele

Interference from between other variables is equal between two groups

Outcomes can be compared between groups

Mendelian Randomization
Using genetic variation to infer causal biomarker-disease associations

Genotypes are randomized at meiosis
– if population stratification is controlled, associations with phenotype are unconfounded except by short-range allelic associations

Structural causal model: causation can be inferred if one of three conditions holds
– an instrumental variable has been measured
– all confounders have been measured
– an unconfounded variable on the causal pathway has been measured

Adapted from George Davey Smith, 2014

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Methodology

- Qualitative paradigm:
  - Rooted in interpretive and constructivist philosophies.
  - Assumes reality is socially constructed through individual or collective definitions of situations (Marshall and Rossman, 2011; Cresswell, 2007).
  - Knowledge is constructed and not created (Schwandt, 2000; Lincoln and Guba, 2000; Charmaz, 2006).
  - Epistemologically, constructivism emphasizes the subjective interrelationship between the researcher and participant, and the co-construction of meaning (Mills et al., 2004).
Methods

- Data source:
- Field notes
- Memo written throughout data collection and analysis
- Interviews (Face-to-face; telephone)
- E-mails (For contacting participants and clarification)
Data Collection

- Participants
  - N=9 Physician Assistants (PAs)
  - Gender: male (n=4) and female (n=5)
  - Ethnicity: All Caucasian
  - Age range: 25-70 years old
  - Average years in practice: 19.78 years
  - Sample: theoretical sampling
  - Homogenous in nature
- Access
  - WMU HSIRB and Department of PAs at WMU/CHHS
Data Analysis

- Constant comparative method:
  - Open coding
  - Axial coding
  - Selective coding
  - Continued use of memo

### Table 1: Example of the coding process

<table>
<thead>
<tr>
<th>Open Codes</th>
<th>Properties</th>
<th>Examples of Participants words</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expressing difficulty</td>
<td>• Feeling uneasy</td>
<td>It’s hard to say</td>
</tr>
<tr>
<td></td>
<td>• Feeling uncomfortable</td>
<td>- It's difficult</td>
</tr>
<tr>
<td></td>
<td>• Depending on</td>
<td>- It’s a mess</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- It’s depends individual health</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Depends on who you are</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- It depends on everyone definition of moderate</td>
</tr>
<tr>
<td>Doubting the evidence</td>
<td>• Being skeptical</td>
<td>Evidence is not clear</td>
</tr>
<tr>
<td></td>
<td>• Distrusting evidence</td>
<td>- Needs more knowledge</td>
</tr>
<tr>
<td></td>
<td>• Being cautious about alcohol use</td>
<td>- Evidence is too soft</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Have not seen any health benefits in my years of practice</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- I just don’t believe it’s beneficial</td>
</tr>
</tbody>
</table>
Trustworthiness

- Credibility (Lincoln & Guba, 1985)
  - Prolong engagement in the field (3 months)
  - Multiple sources of data
  - Use of peer debriefer
  - Audit
  - Member checking
- Transferability (Appendix for documents)
- Dependability (Evaluation of the value of the integrated processes of data collection, data analysis, and theory generation, please see Ch. 3 & 4).
- Confirmability (How well the inquiry’s findings are supported by the data collected). Evidence from the literature supports the findings

- Ethical consideration
- Respect for persons, benevolence and justice, and are usually thought about mainly during the procedure for gaining informed consent
- Researcher respected participants’ opinions, and assured them of complete confidentiality (e.g., assigning pseudonym for anonymity)
- Researcher’s role
- Epic vs. Emic
- Control of researcher’s bias (Helped by the Committee)
Four main categories emerged from the data: 1) 'subjectivity', 2) 'Vulnerability', 3) 'Expressing Doubt' and 4) 'Imparting Knowledge'.

The four main categories had a total of nine properties and dimensions.

Core category or central idea was 'conflict', which is the basic social process participants experienced.

(conditions indirectly related to the central idea and affecting participant’s perspective).

Cultural beliefs and context are contextual conditions interact
Wat is the Bottom Line

- In-depth evaluation of the arguments in favor of health benefits of moderate drinking shows it falls short.

- Conflict (Discovered theory)

  *In the end it bites like a snake and poisons like a viper. Proverbs 23:32*

- Points and counterpoints in the literature
Explanation
Who has woe? Who has sorrow? Who has strife? Who has complaints? Who has needless bruises? Who has bloodshot eyes?

Those who linger over wine, who go to sample bowls of mixed wine.

Do not gaze at wine when it is red, when it sparkles in the cup, when it goes down smoothly!

In the end it bites like a snake and poisons like a viper.

Your eyes will see strange sights and your mind imagine confusing things (Proverbs 23: 29-33).
Figure 2: The Grounded Theory of Primary Care Providers’ Experience of the Effects of MAC on Health (Tchamba, 2015)

The theory also accounts for and explains the different conditions that influence PAs perception of MAC.

The theory is dynamic in nature and represents the experiences of PAs.

The substantive theory accounts for and explains the variation in the experience of PAs.

CB= Cultural Beliefs
C= Context

Knowledge (Risk vs. Benefits Awareness of own risks)

Subjectivity (Contingent Expressing difficulty Other variables)

Vulnerability (Too risky Unintentional abuse)

Doubt (Exercising caution Lacking credible information)
Low dose Alcohol & Health Outcomes

Who has woe? Who has sorrow?
Proverbs 23:22

- It all started with a gaze

Should we believe?
So What?

- The findings of this study can help with much needed policies for alcohol prevention that will take into account the complex nature of alcohol and the complexity of those who consume it.
- A new definition of moderate alcohol consumption by the Dietary Guidelines for American (DGA) is needed that will take into consideration subjective interpretation of the word ‘moderate’.
- The religious perspective should be recommended as alternative

- For Policy makers
- For practitioners
- For the general public
- For the Seventh-day Adventist Church
What’s my Responsibility?

it is not only for what we do that we are held responsible, but also for what we do not do.

Moliere

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Recommendation for Future Research

- A cost-effectiveness evaluation of the effects of moderate alcohol consumption on health can help understand the true health benefits/risks in terms of number of years loss or gained with consumption.

- Need more studies using the Mendelian Randomization.

- Need more studies to explore alcohol industries and their claim of First Amendment right to advertise health benefits of MAC.

- The Biblical perspective needs more exploration
Henry Wadsworth Longfellow once wrote a poem of warning:

Touch the goblet no more!
It will make thy heart sore
To its very core!
Its perfume is the breath
Of the angel of death,
And the light that within it lies
Is the flash of his evil eyes.
Beware! Oh, beware!
For sorrow, sickness, and care,
All are there!


