SYSTEMATIC REVIEW AND META-ANALYSIS OF THE PREVALENCE OF SUBSTANCE USE IN SOUTH AFRICAN ADOLESCENTS

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Child & Adolescent Mental Health Initiative South Africa
Διεθνής Πρωτοβουλία για την Υγεία Global Health Initiative
ΙΣΝ / SNF ΙΔΡΥΜΑ ΣΤΑΥΡΟΣ ΝΙΑΡΧΟΣ STAVROS NIARCHOS FOUNDATION επίκεντρο ο άνθρωπος humanity at the core
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BACKGROUND

- Substance use among adolescents is a growing public health concern in South Africa.

- Early exposure/initiation linked to:
  - Mental health conditions
  - Poor academic outcomes
  - Other risk behaviors

- Lack of nationally representative data limits prevention and treatment efforts.



OBJECTIVES

- Synthesize published prevalence data on substance use among adolescents (<19 years).
- Identify patterns of exposure across provinces.
- Inform evidence-based prevention and early intervention strategies.
- Supported by the Stavros Niarchos Foundation (SNF) Global Center at the Child Mind Institute with funding support from the Stavros Niarchos Foundation (SNF) as part of its Global Health Initiative(GHI).

METHODOLOGY

- Systematic review & meta-analysis (PRISMA guidelines)
- Databases: PubMed, PsycINFO, Web of Science, Scielo, Google Scholar
- Inclusion:
  - Community/school-based studies with prevalence data for adolescents. surveys with community- and/or school-based samples
  - Report on sample of adolescents under the age of 19, or if young adults were included in the study, a sample with a mean age under the age of 19 was included.
- Joanna Briggs Institute checklist - study quality
- Meta-analysis in R, random effects model, heterogeneity (I^2)
- 30 studies included, 202 prevalence estimates (n=120,041)

Drug and Alcohol REVIEW APSAD

REVIEW | Open Access

Systematic Review and Meta-Analysis of the Prevalence of Substance Use Among Adolescents in South Africa

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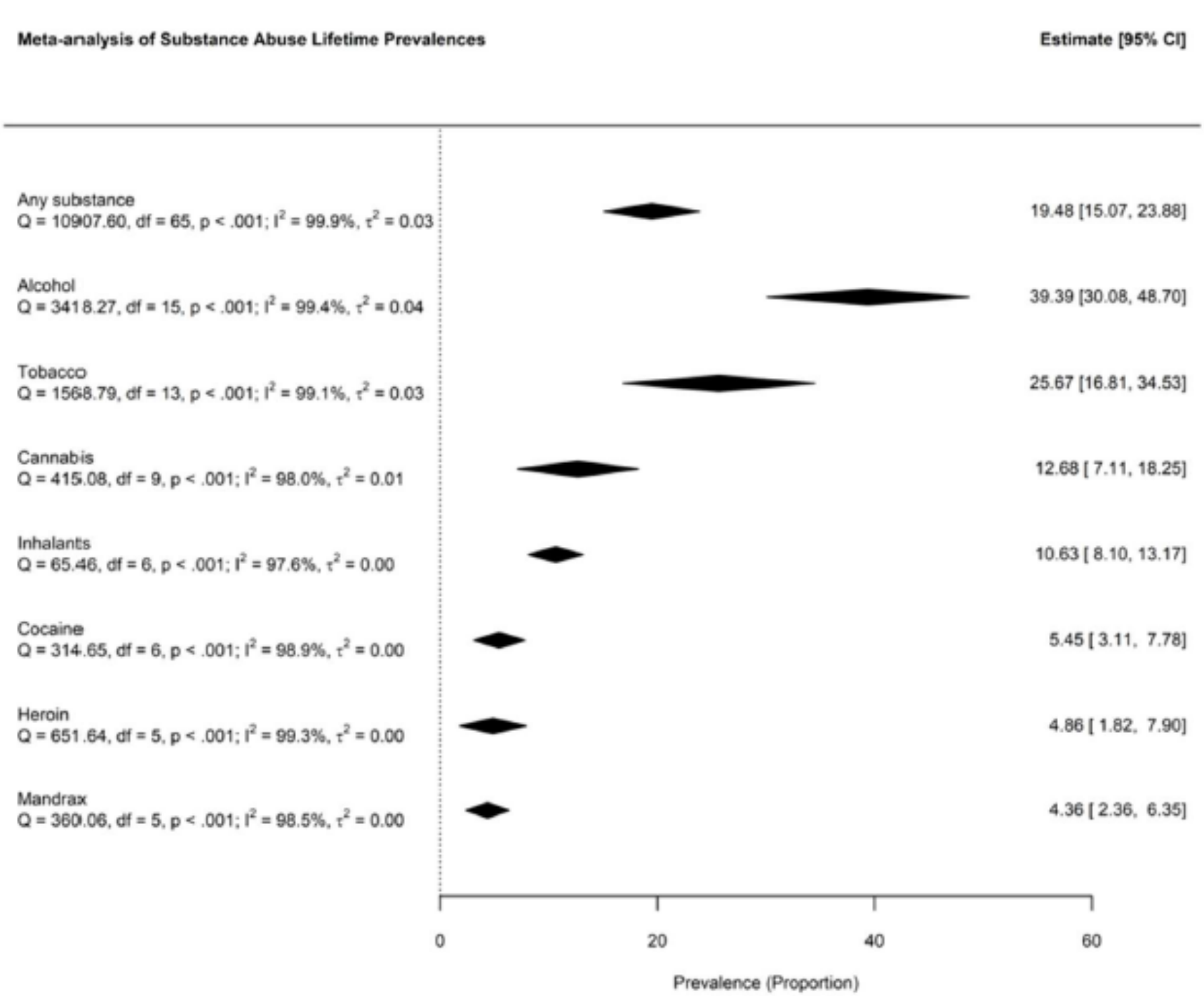
KEY FINDINGS LIFETIME USE

- Alcohol: 39.4% (95% CI: 30.1–48.7)
- Tobacco: 25.7% (95% CI: 16.8–34.5)
- Cannabis: 12.7% (95% CI: 7.1–18.3)
- Any substance: 19.5% (95% CI: 15.07–23.88)

- High heterogeneity across studies.

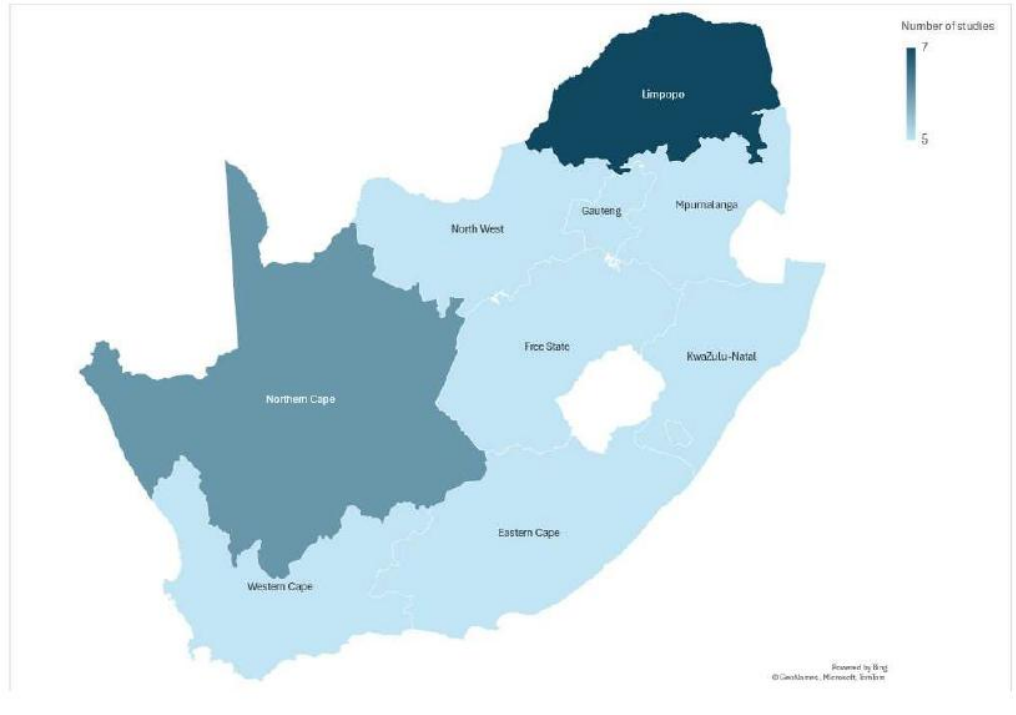
Other substance use

- Less commonly investigated substances <5 studies
  - Amphetamines (e.g. 6% 1 month prevalence)
  - Over the counter drugs (e.g. 15.5% lifetime prevalence)
  - Tranquillizers (e.g. 5% 1 month prevalence)
  - Tik (meth e.g. 0.7% lifetime prevalence)
  - club drugs/MDMA (e.g. 2% lifetime prevalence)
- Nyaope (whoonga) – 2 studies
- Street drug (low grade heroin) included in the meta-analysis of heroin use


Meta-analysis of Substance Abuse Lifetime Prevalences
Estimate [95% CI]
Any substance
Q = 10907.60, df = 65, p < .001; I² = 99.9%, τ² = 0.03
19.48 [15.07, 23.88]
Alcohol
Q = 3418.27, df = 15, p < .001; I² = 99.4%, τ² = 0.04
39.39 [30.08, 48.70]
Tobacco
Q = 1568.79, df = 13, p < .001; I² = 99.1%, τ² = 0.03
25.67 [16.81, 34.53]
Cannabis
Q = 415.08, df = 9, p < .001; I² = 98.0%, τ² = 0.01
12.68 [7.11, 18.25]
Inhalants
Q = 65.46, df = 6, p < .001; I² = 97.6%, τ² = 0.00
10.63 [8.10, 13.17]
Cocaine
Q = 314.65, df = 6, p < .001; I² = 98.9%, τ² = 0.00
5.45 [3.11, 7.78]
Heroin
Q = 651.64, df = 5, p < .001; I² = 99.3%, τ² = 0.00
4.86 [1.82, 7.90]
Mandrax
Q = 360.06, df = 5, p < .001; I² = 98.5%, τ² = 0.00
4.36 [2.36, 6.35]
0
20
40
60
Prevalence (Proportion)

GEOGRAPHIC DISTRIBUTION

- Studies covered all 9 provinces.
- Limpopo (n=7) and Northern Cape (n=6) most represented.
- Lack of uniformity in instruments and timeframes
- Need for standardized, nationally representative surveillance.



CONCLUSION AND RECOMMENDATIONS

- High exposure to variety of substances among SA adolescents
- Need for nationally representative survey data to accurately present scale
- Guide policy and programmes for reducing harms of substance use in young people
- Strengthen national surveillance and resource allocation
- Evidence-based prevention targeting early stages of substance use and poly substance use

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