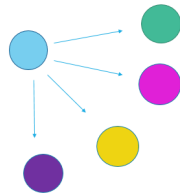


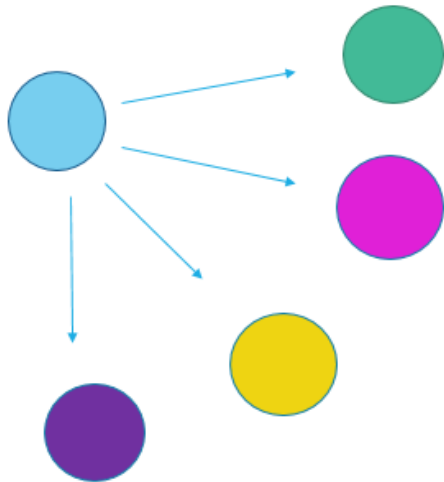
# The evolution of network ties within a community-based obesity prevention initiative



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# BACKGROUND



- ❑ Partnerships are identified as critical to the success of community-based programs
- ❑ Network analysis in public health networks studies usually focuses on one local network rather than local networks in multiple communities.
- ❑ Partnerships can be characterised by different dimensions; strength of network ties is one dimension.

Weak ties

Exchange of information

Strong ties

Common goals, exchange of resources, signing agreements

- ❑ Strength of weak ties concept considers the significance of “weak” ties like acquaintances and occasional contacts.
- ❑ This study will be evaluating the partnerships formed within the communities of South Australia’s OPAL program.



# RESEARCH QUESTIONS

**Quantitative:** Does the perceived strength of partnership ties created within 20 OPAL communities evolve over time as a function of role, sector and region?

**Qualitative:** What are the factors that shape partnership strength?

**Mixed Method:** What results emerge from comparing semi-structured qualitative interview data about the factors that shape partnerships with outcomes from the quantitative survey data measuring the perceived strength of partnership ties?



# METHODS: STRENGTH OF TIES SCALE



## **Not linked (1)**

OPAL does not have worked with this organisation.

## **Communication (2)**

OPAL and the organisation share/exchange information or engage in networking activities.

## **Cooperation (3)**

OPAL and the organisation share/exchange information and work together when the opportunity arises.

## **Coordination (4)**

OPAL and the organisation work side-by-side to achieve common goals.

## **Collaboration (5)**

OPAL and the organisation work side-by-side to achieve common goals and actively pursue opportunities to work together as an informal team

## **Partnership (6)**

OPAL and the organisation work together as a formal team with specified responsibilities to achieve common program goals.

## **Fully linked (7)**

OPAL and the organisation mutually plan, share staff and/or funding resources, act as one.

Adapted from Harris 2008 → face validity

Intra-rater reliability:

Substantial agreement:

Weighted Kappa (CI 95%): 0.78 (0.73;0.83)



# METHODS: SAMPLING

20 OPAL community contact lists collected

Stratified random sampling of organisations by sector (n=13)

Survey administration:

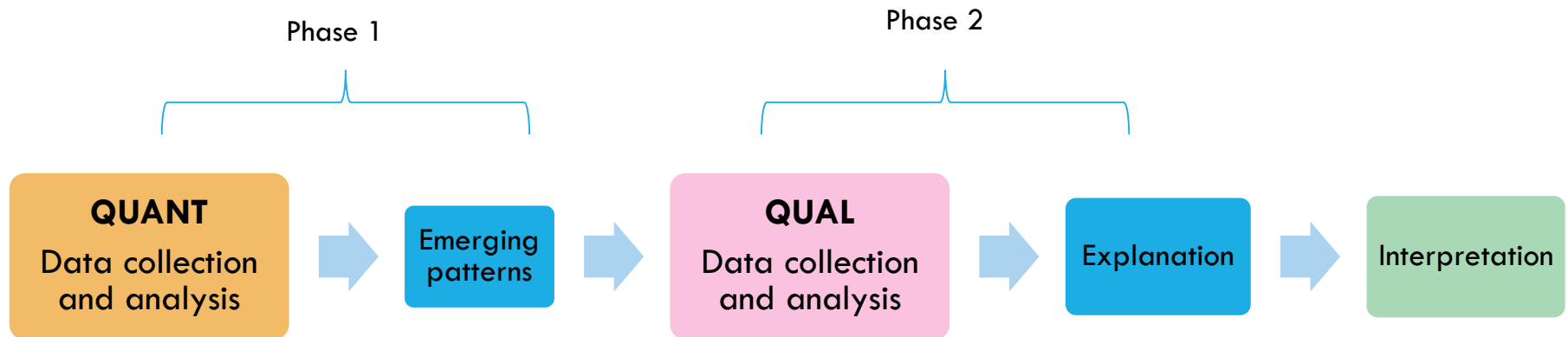
- Retrospective rating of relationships
- Self-report
- One survey per staff member
- Completed by 38 respondents;  
20 Managers, 18 OPSOs

Classification of Sectors (n=13) in OPAL

Arts & Culture	Business & Commercial	Community Development
Education & Training	Environment & Conservation	Health & Fitness
Justice & Welfare	Kids, Youth & Families	Media
Planning & Design	Sports & Recreation	Tourism
	Transport	



# METHODS: MIXED METHODS DESIGN



# METHODS: PART 1 QUANTITATIVE ANALYSIS



Partnership tie ratings were classified as either “weak” or “strong”;

Change in proportion of weak ties over time by variables of interest (role, region, sector);

Analyses were conducted on WinPEPI Version 11.44;

Cochrane Armitage linear trend test, post-hoc multiple pairwise comparisons;

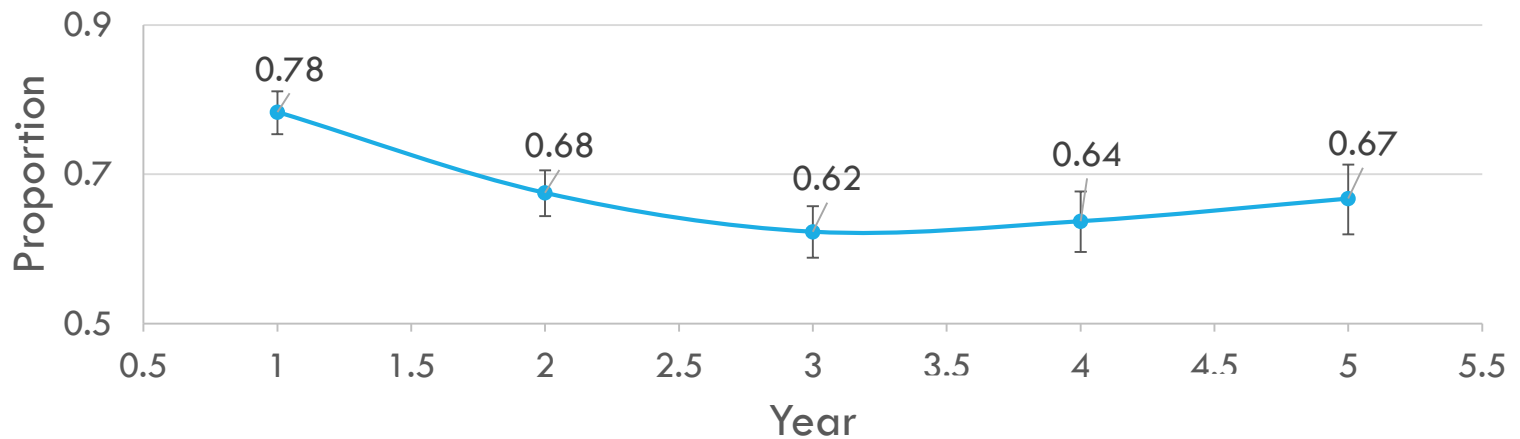
Comparison of 3 or more matched samples; F-test (based on analysis of variance), followed by Dunnett multiple comparison procedure for pairwise comparisons;

Fisher’s P exact test was used to compare matched samples by specific year (Regional vs Metro).



# RESULTS: ACROSS PHASES

Change over time in the proportion of weak ties across intervention phases (Proportion as point estimate showing exact mid-p 95% CIs)



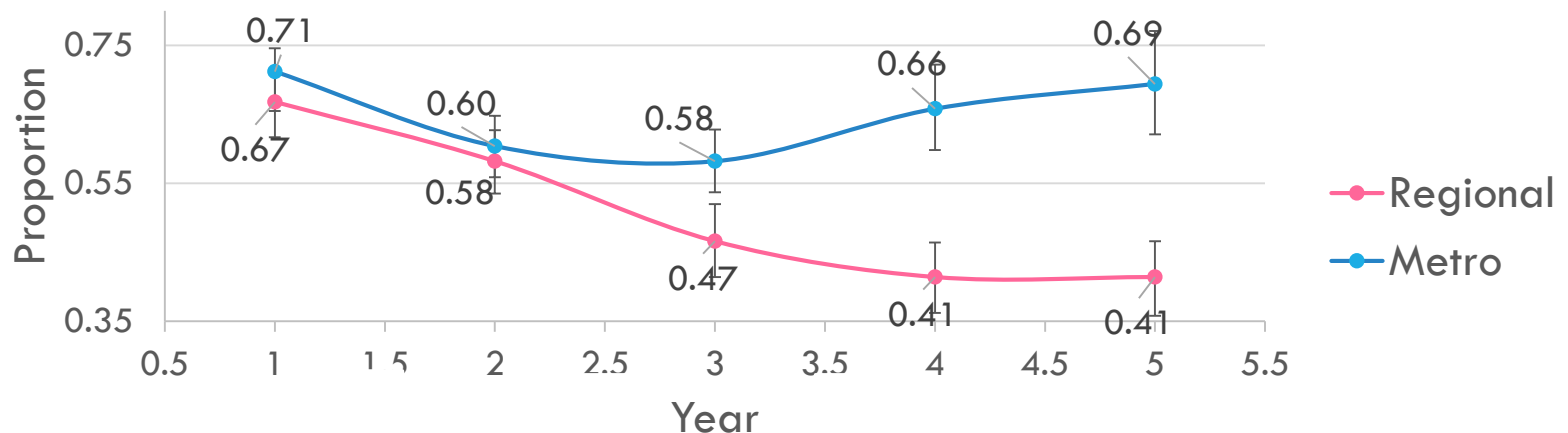
$\chi^2 = 28.60_{(DF: 1)}, p = <0.001$





# RESULTS: REGION ACROSS PHASES

Change over time in the proportion of weak partnership ties across intervention phases for REGION (Proportion as point estimate showing exact mid-p 95% CIs)



Regional:  $X^2 = 56.45$  (DF: 1),  $p = < 0.001$  (Sig for Year 1 with 2,3,4 and 5)

Metro:  $X^2 = 0.01$  (DF: 1),  $p = 0.94$  (Sig for Year 1 with 2 and 3)

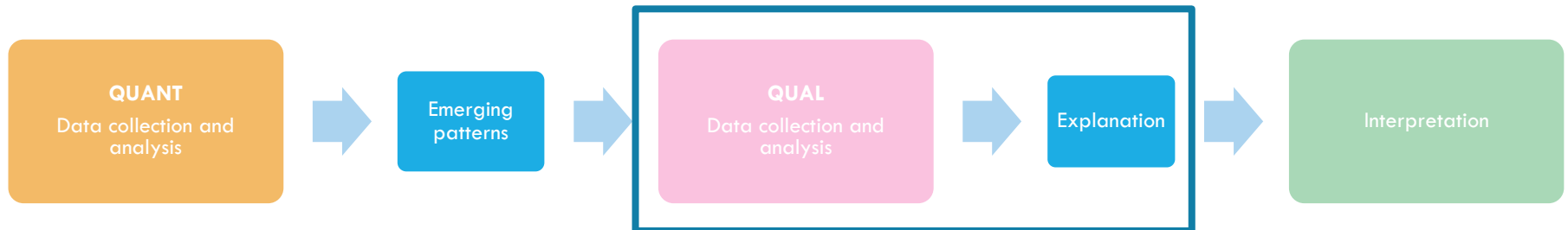
Between samples:  $F = 7.88$  (DF: 1),  $p = 0.048$



# RESULTS: SECTOR ACROSS PHASES



# METHODS: PART 2 QUALITATIVE ANALYSIS



Interview questions were developed based on emergent patterns from quantitative data;

Maximum variation sampling (n=20);

Analyses to be conducted in NVivo.

Design: Thematic networks analysis;

Seeking to understand the factors that contributed to the patterns;

Results will provide insight into the factors influencing partnership evolution.



# PRELIMINARY QUALITATIVE RESULTS

- The strengthening of OPAL partnerships over time may reflect the building of trust and long-term collaborations within communities; weakening of ties at Year 5 may represent stakeholder independence and program exit from the community.
- Partnerships strengthen more in regional communities than in metropolitan communities possibly due to differences in population density, access to services and community engagement between small cities and larger metropolitan areas.
- Partnership ties were found to vary by sector; may reflect common goals and where target population is mostly represented as well as challenges around 'big' sectors.
- OPAL location within local council premises set the program at an advantage by having daily and casual contact with key individuals; more efficient communication.



# BROADER APPLICATION

- Data from this study will be fed back to OPAL staff as part of the overall evaluation report from the SCU.
- This may be used as a self-assessment tool way to monitor partnerships at the local government level throughout the course of a program.
- Can also be implemented in the context of the evaluation of regional public health planning throughout local councils of SA; have partnership goals been met? How have these partnerships evolved?



# THANK YOU



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