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Evaluating Interorganizational Collaborations: Lessons Learned from Five California Geriatric Workforce Enhancement Programs

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ABSTRACT:

Background: Five Geriatric Workforce Enhancement Programs (GWEPs) in California, funded for four years, worked collaborately across different organizations to provide education on aging issues and/or training to enhance services for older adults.

Objectives: To investigate characteristics of the collaborations that were associated with perceptions and experiences of success for participating organizations.

Methods: A survey distributed to 37 organizations participating in five GWEPs measured the correlation of resources and dimensions of collaboration with perceived sense of success of the collaborations. Interviews with 30 representatives of the participating organizations collected information about perceived barriers, impact and satisfaction with the collaborations.

Results: Overall perceptions of interorganizational collaboration success were associated with provision of physical resources and four key measures of collaboration (governance, administration, mutuality and norms/trust). Barriers to success were described in terms of organization functioning and resources. Strong communication appeared as a facilitator of success, and reciprocity was described as a key experience of satisfaction.

Conclusions: This study highlights the positive effects of shared goals, the experience of reciprocity, and communication during interorganizational collaborations. It also notes the negative effects of having inadequate resources and organizational dysfunction.

KEYWORDS: Community health partnerships, Process issues, Organizations, Academic Medical Centers, Manpower, and Services, Health Care Quality, Access, and Evaluation, Evaluation Studies, Program Evaluation, Health Services for the Aged

Background

Numerous factors have increased pressure on academic medical centers to become more engaged with their communities, working with not only patients and families, but with local public health and human service organizations[1]. Some funding agencies that are working to accomplish population- or condition-specific health objectives have formally required community engagement from grantees. For example, the Patient-Centered Outcomes Research Institute (PCORI) requires engagement with patients and other healthcare stakeholders as equitable partners in studying patient outcomes[2]. And, PCORI's website features a list of resources to facilitate this work.

But not all funding agencies can provide specific direction on building and maintaining community engagement, especially among organizations. The Health Resources and Services Administration (HRSA), for example, funds more than 40 Geriatric Workforce Enhancement Programs (GWEPs) throughout the U.S. and associated territories to help address the shortage of geriatric knowledge in health and human services. The core purpose of the GWEPs is to promote quality improvement in the care of older adults through interprofessional and education initiatives[3], and these programs, which provide extensive reporting on their outputs and outcomes, have been funded in two sets of 4- and 5-year increments since 2015. They are generally based in academic medical centers to provide education, training and/or consultation in collaboration with local and regional service organizations that provide primary care, mental health services, other supportive services, and/or expertise with specific older adult populations, such as individuals who suffer from dementia[4,5]. Due in part to the great diversity and scope of the GWEPs, HRSA allows the programs maximum flexibility in building and managing their community engagement efforts.

GWEP community engagement efforts often manifest as interorganizational collaboration, or a set of non-hierarchical relationships in which different organizations work together on common goals without a profit motive[6,7]. (In some of the published research, these programs are referred to as cross-sector partnerships[8] but, for purposes of this paper, the term interorganizational collaboration will be used.) Typically, interorganizational collaborations are used to address complex problems with roots in multiple sectors, professions and disciplines[9]. An example of such a problem could be to improve the care of older adults amidst widespread ageism and a dearth of specialists in geriatric medicine.

Published research on interorganizational collaborations has been mostly limited to individual programs, industries, or sectors, and comprehensive, general knowledge of the field has been largely compiled by reviewers of disparate studies [9, 10,11,12]. Reviewed studies have been grounded in a wide range of conceptual frameworks (although primarily organizational theories) or no overt theoretical framework at all[10]. General factors that have been shown to influence success among collaborations include individual relations, ideology on the partnerships; capacity on organizations' interactions; and resources on sectoral engagements[10]. There is emphasis on valuing trust built over time and utilizing institutional norms or contracts[9, p.1119]. Alignment of goals among organizations within collaborations has also been associated with success[10,13], as has promoting inclusiveness, trust and non-hierarchical leadership[13].

Reviews of published research on interorganizational collaboration have also demonstrated, among other gaps, that more mixed methods studies of multiple collaborations are needed, especially studies that focus on the processes at play in interorganizational collaborations—how they do and do not work[10, p.4, 11, p.227]—an area also referred to as the "black box" between antecedents and outcomes[14, p. 21].

This area is of particular interest, in part, because like the complex problems that interorganizational collaborations work to address, the collaborations themselves are highly complex. They feature constantly adapting interactions among individuals, teams, organizations and networks, which are in turn affected by fluctuating levels of trust and cooperation influenced by previous experiences[10]. In other words, interorganizational collaborations are inherently unstable, and this may or may not affect outcomes[11].

Existing research and theory on the processes of collaborations illustrate complex, perpetually unfolding entities operating in dimensions of structure, social capital and autonomy[14, 19]. Among those theorists and researchers focused specifically on the "black box," or collaboration processes, interorganizational collaborations are perceived as a "journey" [15, p. 68], and managing them involves ongoing give and take and renegotiation[14, p. 22]. For Ball, Forbes, Harris and Forsyth, "black-box" research follows methods rather than theory and is valuable because effective outcomes, although not guaranteed, are more likely to result from organizations that are working well together[13, p. 390].

Five GWEPs in California that were funded from 2015-2019 presented an opportunity to study the process of multiple interorganizational collaborations and evaluate how they were working and not working while they were underway. The programs were located at the University of California, Irvine (UCI); University of California, Los Angeles (UCLA); San Diego State University (SDSU); University of California, San Francisco (UCSF), and University of Southern California (USC). Combined, these five GWEPs represented 38 organizations that provided a broad spectrum of services to older adults in urban and rural areas of the state through academic, public and private settings of the health and human service economies (see Table 1).

Each of the five GWEPs had disparate goals and objectives, and each program varied in the types of organizations it included. Some were more focused on academic organizations with community engaged providers, and others on community clinics or service agencies. Participating organizations were included in their respective GWEPs primarily according to their internal capacities, leadership commitments, and the broader needs of the community as established by the Principal Investigators (PIs) who were all based at academic institutions. Also, although HRSA held the GWEPs' PIs responsible for the outputs and outcomes of the interorganizational collaborations, they received little direction from HRSA on how to establish or manage them. Decision-making occurred situationally and often involved only one or two of the organizations involved according to each GWEPs specific program goals and objectives.

Designing a study that could capture comparable information about such different and complex programs has been identified as key challenge for researchers of collaborations.[10] Yet, the four GWEP evaluators who began the study sought to identify general factors contributing to the successful management of all of the interorganizational collaborations. (San Diego State University joined the project after the initial design phase of the research.) These four evaluators invited representatives from their GWEP's collaborators to plan and design a study. Initiatlly, the evaluators met with 23 individuals, 13 from community organizations, and 11 from academic departments or divisions other than the GWEPs' principal investigators. At least one collaborating organization from each of four GWEPs was represented.

Together the members of the working group agreed to focus on what makes GWEP participation productive and beneficial for the programs and organizations. Individual organizations were selected as the unit of analysis. Participants in the group also agreed that differences among the GWEPs' goals and objectives precluded measuring partnership success

through standard health services program outcomes such as changes in provider knowledge, the provision of care, or the wellbeing of patients received care from GWEP trainees[16]. Through discussion and confidential polling, the group decided on a mixed method study that was to be implemented and disseminated by the GWEPs' evaluators because none of the organizations could spare ongoing resources to work on the study. The group decided that the evaluators were to study partners' perceptions of program success and interview them about their experiences with program structures (e.g., resources), processes (e.g., roles and activities) and outcomes (e.g., growth and change in trainees knowledge, skills or abilities) to explore, ultimately, what was and was not working. Participants reported that these three types of information were meaningful due to their use in health services research[17]. The group used perceptions of success and (positive/negative) organizational experiences as outcomes to assess how the the collaboration was or was not working.

The group also thought to identify attributes of collaborations that had been previously validated in published literature. The believed that collecting the perceptions of success and positive experiences across all of these GWEPs could inform future efforts at community engagement through interorganizational collaboration in health and aging projects. They felt that results could offer HRSA and other funding agencies guidance on how to improve the establishment and evaluation of collaborations among their grantees, regardless of the specific outcomes that they sought to affect. They thought they might be able to point leaders who are at the intersection of primary care, public health, and aging to key areas to improve the process of interorganizational collaboration. This could be especially useful for collaborations funded by grants with short deadlines, which can restrict attention to design elements such as nuanced partner selection and detailed discussion of shared outcomes before work is underway. Such a

study could also enhance existing literature on interorganizational collaboration through quantitative and qualitative attention to process across multiple collaborations.

The evaluators reached out to their programs' Principal Investigators and offices of human subjects research. Like the work of the GWEPs, this study was considered quality improvement rather than research by SDSU, UCI, UCSF, and USC. UCLA rejected the study for IRB review due to its use of organizations as the unit of analysis.

Methods

As agreed to by the GWEP working group, the evaluators conducted a convergent parallel mixed-methods study, in which the quantitative and qualitative elements occurred concurrently in the same phase of the research process, were weighed equally, analyzed independently, and then interpreted together[18]. The evaluators reviewed existing instruments from theory and research on collaborations' processes and focused on those that described partnerships at the organizational level, and in a positive perspective (rather than as a problem).

They then created a survey and semi-structured interview guide and reached out to representatives of all of the organizations to survey the effect of partnership resources and characteristics on perceived success, and to schedule interviews to collect information about how participating organizations were experiencing the collaborations' structures, processes, and outcomes.

Measures

To develop study instruments the evaluators focused on published studies and theory concerning organizations in successful collaborations. They developed the study's quantitative survey from validated instruments when possible. The three topics the evaluators measured were:

Resource Adequacy: 12 questions that the evaluators developed to evaluate three types of resources: *personnel* (the adequacy of staffing for various activities), *physical space* (including physical, virtual and clinical environments), and *materials* (supplies and financial support). Respondents were asked to indicate "how adequately this resource is meeting your needs" using a 5-point Likert-type scale from 1=not at all adequate to 5=completely adequate.

*Partnership Characteristics:*16 questions from a 17-question instrument developed to measure five dimensions of collaboration developed by Thomson, Perry and Miller[19]. The tool measures *governance* (2 questions), *administration* (4 questions), *autonomy* (3 questions), *mutuality* (5 questions) and *norms/trust* (2 questions). One question in the original instrument about whether individuals in the partnerships are trustworthy was not included because the study focused on organizations not individuals. Respondents were asked to "consider the extent to which the partners engage in certain partnership behaviors or exhibit certain attitudes" using a 7-point Likert-type scale ranging from 1=not at all to 7=to a great extent". Three of the items were negatively worded and so reverse coded in the scoring.

Perceived Partnership Success: 8 questions composing the Perceptions of Coalition Success domain of the Coalition Assessment Tool (CAT) developed by Marek, Brock and Salva[20]. The questions involve perceptions of success in achieving coalition goals and objectives, the effectiveness of working as a coalition (rather than as a single organization), and confidence that the coalition will continue to work together in the future. Seven of the questions use a 10-point Likert-type scale as follows: 1=completely unsuccessful, 5=somewhat successful and 10=completely successful.

Three questions use a different 10-point Likert-type scale (1=not at all confident, 5=somewhat confident, 10=very confident). The evaluators created a total success score by averaging the responses across all 8 questions.

For the qualitative instrument, evaluators identified key theoretical partnership characteristics primarily from Gadja[15], Ball, Forbes, Harris and Forsyth[13], and Hardy, Hudson, and Waddington[21]. The evaluators developed open-ended interview questions with various prompts about the characteristics they found in the literature and sorted them into the Donabedian information categories of structure, process and outcomes[20] that working group participants reported as meaningful.

Data Collection and Analysis

To administer the quantitative survey, the evaluators collected the names and email addresses of the individual lead representatives from each partnering organization. The evaluators identified a total of 56 individuals and sent them an online survey asking them to respond confidentially on behalf of their organization. From the data for all study measures the evaluators calculated means and standard errors using *Stata* Version 13.1 (College Station, Texas: Stata Corporation; 2012), and the evaluators used logistic regressions to examine the relationships of partnership characteristics and resources with perceived partnership success. For regression analysis, the evaluators dichotomized partnership success at the mean (i.e., >=8 out of 10) to indicate success and conducted logistic regressions because the assumption of normal distributions required for linear regression was not met. The evaluators conducted separate, rather than multivariable, regressions for each characteristic or resource because of the small sample size, presenting odds ratios, 95% confidence intervals and p-values.

For the qualitative study, each GWEP evaluator independently conducted and recorded semi-structured interviews with representatives from their partnering organizations and home institutions. The resulting 30 interviews were then transcribed and analyzed with a grounded theory approach as described by Graneheim and Lundman[22]. With the exception of the use of sub-themes/sub-codes, the evaluators used a coding method similar to the one described in Hewitt-Taylor's[23] study on constant comparative analysis. Specifically, each evaluator read the texts of their interviews allowing themes to emerge. They were then grouped by constructs to reflect the study's focus on what does and doesn't work - what makes GWEP participation productive and beneficial for the programs and organizations and alternately, obstructions.

Two evaluators read all of the interviews, reviewed all of the themes and constructs that had been noted, and iteratively refined and finalized the code structure until thematic saturation was reached. One evaluator then applied the code structure to all interviews and analyzed them using Dedoose 8.0.35 (Manhattan Beach, CA: SocioCultural Research Associates, 2011).

Table 2 presents the study's coding system. Each phrase, sentence, paragraph, or section of the transcript was given a construct if applicable. If a portion of the transcript had a construct, a subtheme could be applied as well. Constructs could be used without a subtheme. However, subthemes were not used without a construct. Two evaluators then analyzed the frequency of constructs and subthemes.

Results

Quantitative and qualitative results highlighted specific aspects of collaboration associated with perceived success, and specific descriptions of facilitators and satisfactory experiences among stakeholders.

Quantitative Results

A total of 37 out of 56 individuals responded to the survey (66% response rate); however, most of those who did not respond were at organizations where other(s) did submit data. The respondents represented five types of organizations: academic partners outside the department of the principal investigator (n=14, 25%), non-profit services (n=7, 12.5%), medical services not at a university (n=6, 11%), Alzheimer's Associations (n=7, 12.5%), and Area Agencies on Aging (n=3, 5%). Table 3 presents findings from our descriptive and bivariate analysis Data was collected from all but five of the 38 organizations participating in the GWEPs.

Descriptive Analysis: The mean perceived partnership success score was 8.14 out of 10 points [Standard Deviation (SD) = 0.32]. The three mean resource adequacy scores were very similar 4.07 out of 5 points for material resources (SD = 0.2), 4.09 (SD = 0.14) for physical, and 4.10 (SD = 0.13) for personnel. Partnership characteristic scores ranged from a low of 5.87 out of 7 points (SD = 0.21) for administration to a high of 6.42 (SD = 0.23) for autonomy.

Bivariate Analysis: One of the three resource adequacy measures was associated with perceived partnership success [physical resources, OR=5.25, 95% confidence interval (CI): 1.39-19.75]. Four of the five partnership characteristics were associated with success, with statistically significant odds ratios ranging from 6.17 (CI: 1.83-20.72) for administration to 17.97 (CI: 1.56-206.46) for norms/trust.

In brief, the quantitative results showed that the collaborative dimensions of mutuality (e.g., all partners benefit from the collaboration) and norms/trust (e.g., organizations can count on each other) contributed the most to perceived partnership success. Additionally, autonomy (individual priorities conflict with those of the partnership) was the only dimension of collaboration that did not have a statistically significant relationship with perceived collaboration success. This may reflect a high degree of mission alignment among the organizations

participating in the organizations, and/or successful communication of shared goals during the design phase.

Qualitative Results

Our analysis of the 30 coded organizational interviews focused on the frequency with which constructs and their subthemes appeared after analysis by the evaluators as described above. As previously explained, constructs, by design, were to reflect the study's focus on process—what was providing benefit or hindering collaboration. The constructs thus included experiences of satisfaction, as well as descriptions of barriers and facilitators to collaboration. Throughout the interviews, two constructs emerged more than 200 times: impact and barriers.

Descriptions of impact consistently highlighted participants' focus on older adults and improving their care. Despite known organizational differences in funding, staffing, resources, and the types of services they provided to older adults, all of the organizations expressed commitment to the overarching GWEP goal of improving the wellbeing of older adults.

> *I think were respected as being really committed to providing excellent care and care experience for the most vulnerable people in [X]. And we're doing the best we can within the constraints that we have. I think…the people we're working with in GWEP really see themselves as trying to support that work and not necessarily change the way, sort of support, enhance, and not ask us to make big structural changes, which I appreciate.*

A comparison of the numbers of barriers and facilitators that emerged from the interviews showed that organization functioning was mentioned most often as a barrier (75) rather than a facilitator (16). Resources showed a similar, although smaller imbalance, with 86 descriptions as a barrier and 57 times as a facilitator. Among facilitators, participants mentioned communication most often, and competition appeared only as a barrier.

The evaluators descriptions of satisfaction with the collaborations also dovetailed with the quantitative outcome of perceived success. In the qualitative study, the evaluators found that reciprocity, or the experience of give and take, emerged as a key satisfying experience for partners. This parallels the high ranking for norms/trust in the quantitative findings. For Thomson and Perry, "norms of reciprocity and trust" represent a dimension of collaboration in which organizational participants can move from experiencing a give and take conducting individual transactions to experiencing a more wholistic experience of good-faith actions from all participants in the collaborative over time[14].

One community organization provided a description of reciprocity as follows:

"That they bring the university, that they bring in the med students, that they're bringing in social work, and public health, and Triple A, and dementia specialist types... it's great, because it allows us to brainstorm in real time about what each other's needs are and what the evaluators can provide each other. "

Conclusion

In this study, evaluators from five California Geriatric Workforce Enhancement Programs worked to answer the following questions: Where should institutional, agency and organizational leaders at the intersection of primary care, public health, and aging focus their attention to improve the process of interorganizational collaboration? How can we ensure that these complex collaborations are successful?

To address these questions, the evaluators studied 38 organizations amidst five four-year interorganizational collaborations throughout California that were working to increase knowledge and skills in diverse aging services. In a mixed method study of the perceptions and experiences of participating organizations, quantitative and qualitative findings dovetailed. They

emphasized the importance of shared organizational goals and the experience of mutuality/reciprocity, as well as the importance of allocating adequate resources to the collaborations. Qualitatively, descriptions of communication appeared often as facilitator to the collaboration.

This study adds to existing literature on interorganizational collaborations by validating the complexity of collaborations operating in a multi-dimensional environment, and by raising questions for additional exploration, such as whether Thomson's dimension of autonomy—the potential for tension between organizational and collaborative interests—may be affected by mission alignment and/or successfully sharing common goals at the beginning of the collaboration.

It also suggests that HRSA and other funders of interorganizational collaborations may want to consider asking future collaborations to describe the protocols that they are using to establish shared goals, maintain communication and promote reciprocity and trust. Given the complexity of these collaborations, it seems important to avoid being overly prescriptive. However, making clear that they appreciate the promotion of factors that are beneficial to collaborations may be useful in their ongoing commitment to the complex problems that the collaborations strive to address.

There are several limitations to this study. First, it fills only a small gap in the research by providing a point-in-time, mixed- method study of the processes of five interorganizational collaborations. It does not compare the collaborations, study them over time, contribute to knowledge about individuals or sectors, or test concepts outside of organizational management theory. Moreover, the organizations included in the collaborations were selected primarily for their capacity and alignment with HRSA's goals for the GWEPs, which focused primarily on

local and regional effects. This meant that national organizations important to aging services, such as AARP, were not studied.

Additionally, despite evaluators' efforts to reach as broad of a representation as possible from the collaborating organizations, quantitatively, they collected data from a small sample (n=37). This, and possibly, disparities among the different GWEPs, may explain the wide confidence intervals in our survey findings. Also, although this was a study of organizations, the data was collected from individual stakeholder representatives who cannot be considered entirely objective[13]. And, more traditional outcome measures such as change in caregiver knowledge, skills or confidence may have been preferable for an evaluation of partnership success in workforce development training programs.

It is possible, however, that by focusing on subjective perceptions of partnership success and experiences, the evaluators increased (slightly) the power of the evaluation and assessed factors of import to all of the five GWEPs' disparate health and aging collaborations, as well as other collaborations working at local and regional levels. Although collaborations in which organizations do not work well together may nevertheless yield beneficial outcomes for complex problems, such outcomes are more likely from effective processes that promote sustainability of the collaborative efforts while reducing conflict and waste.

Additionally, this small study may provide direction for additional research on the sustainability of collaborations, which is another gap in the published literature[10]. Although these five GWEPs received funding for only four years, and all of them met their individual goals and metrics for success, some of the organizations brought together by these specific collaborations continue to work together or seek opportunities to do so. Perhaps collaborations are continuing beyond specific funding opportunities, or they are creating communities of collaboration. It

could be useful to learn if awareness of factors beneficial to the process of collaboration promote more nuanced partner selection and explicit discussion of shared outcomes.

References

1. Szilagyi PG, Shone LP, Dozier A, Newton GL, Green T, Bennett N. Evaluating Community Engagement in an Academic Medical Center. Acad Med. 2014;89(4):585-595.

2. Patient-Centered Outcomes Research Institute. The Value of Engagement. April 25, 2019. Accessed October 2019. Available from: https://www.pcori.org/about-us/our-programs/engagement/public-and-patient-engagement/value-engagement

3. Flaherty E. Rising to the Challenge: The Geriatrics Workforce Enhancement Program (GWEP) and The John A. Hartford Foundation's GWEP Coordinating Center. J Gerontol Nurs: June 2016. Availaible from: https://journals.healio.com/doi/10.3928/00989134-20160613-04

4. Health Resources & Services Administration. Geriatrics Workforce Enhancement Program. Available at: https://www.hrsa.gov/grants/find-funding/hrsa-19-008.

5. Sedgwick D, 2017. Building Collaboration: Examining the Relationship between Collaborative Processes and Activities. J-PART. April 2017;27(2):236-252. Available from: https://doi.org/10.1093/jopart/muw057

6. Gazley B. The Current State of Interorganizational Collaboration: Lessons for Human Service Research and Management. Hum Serv Organ Manag Leadersh Gov. 2017;41:1:1–5. doi: 10.1080/23303131.2015.1095582).

7. Gray, B. Collaborating: Finding common ground for multiparty problems. San Francisco, CA: Jossey-Bass; 1989.

8. Powell W, Neither market nor hierarchy: Network forms of organization. Res Organ Behav. 1990;12:295–336.

9. Parmigiani A, Rivera-Santos M. Clearing a Path Through the Forest: A Meta-Review of Interorganizational Relationships. J Manage. July 2011;37(4):1108–1136. doi: 10.1177/0149206311407507

10. Gazley B, Guo C, What do we know about nonprofit collaboration? A systematic review of the literature. Nonprofit Manag Leadersh. 2020;31:211-232. https://doi.org/10.1002/nml.21433.

11. Majchrzak A, Jarvenpaa SL, Bagherzadeh M. A Review of Interorganizational Collaboration Dynamics. J Manage. July 2015;41(5):1338–1360. doi: 10.1177/0149206314563399

12. Varda D, Shoup JA, Miller S. A systematic review of collaboration and network research in the public affairs literature: implications for public health practice and research. Am J Public Health. 2012;102(3):564–571. doi:10.2105/AJPH.2011.300286

13. Ball R, Forbes T, Parris M, Forsyth L The evaluation of partnership working in the delivery of health and social care. Am J Eval. 2010;25(4):387-407.

14. Thomson AM, Perry JL Collaboration Proceesses: Inside the Black Box. Public Adm Rev. 2006;66:20-32.

15. Gadja R. Utilizing Collaboration Theory to Evaluate Strategic Alliances. Am J Eval. 2004;25(1):65-77. doi.org/10.1177/109821400402500105.

16. Starfield B. Health services research: a working model. N Engl J Med. 1973 July 19;289(3):132–6. doi:10.1056/NEJM197307192890305.

17. Donabedian A. Evaluating the quality of medical care . Milbank Mem Fund. 1966;44(3):166–206.

18. Creswell JW, Plano Clark VL. Designing and conducting mixed methods research (2nd ed.). Thousand Oaks, CA: Sage Publications, 2011.

19. Thomson AM, Perry JL, Miller TK. Conceptualizing and measuring collaboration. J Public Adm Res Theory. 2009;19:23-56. doi:10.1093/jopart/mum036.

20. Marek LI, Brock DP, Salva J. Evaluating collaboration for effectiveness: conceptualization and measurement. Am J Eval. 2015;36(1):67-85. doi: 10.1177/1098214014531068.

21. Hardy B, Hudson R, and Waddington E. Assessing Strategic Partnerships – The Partnership Assessment Tool. Strategic Partnership Task Force, Office of the Deputy Prime Minister. 2003.

22. Graneheim UH and Lundman B: Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. Nurse Educ Today. February 2004;24(2):105-–. doi.org/10.1016/j.nedt.2003.10.001.

23. Hewitt-Taylor J: Use of constant comparative analysis in qualitative research. Nurs Stand. July 4, 2001;15(42):39–42. doi=10.1.1.130.6954&rep=rep1&type=pdf.

Table 1. Type of Partner Organizations by GWEP

Organization Type	SDSU	UCI	UCLA	UCSF	USC	Total
Academic (outside PI's dept)	2		2	5	8	17
Human services	3		1	3	1	8
Medical services (not at a university)		2	3	1		6
Alzheimer's Association	1	1		1	1	4
Area Agency on Aging	1		1	1		3
Total	7	3	7	11	10	38

Table 2. GWEP Partnership Constructs and Subthemes

Partnership Constructs	**Subthemes**
Motivation to Participate	**Synergy of mission**
	Direct benefits to organization: financial, improved efficiency and/or impact
	Indirect benefits to organization: opportunities for service expansion, recognition, exposure of students to geriatrics careers
	Benefit to community: evidenced-based trainings, interventions, evaluation, gap analysis
Facilitators	**Transparency**: information sharing
	Communication: unidirectional, bidirectional, formal, informal, free-form, volume
	Reputation: public and professional perception, status
	Competition between partners: funding, reach/expansion
	Resources: time, staff, funding
	Organization functioning: isolation, proximity, efficiency, stability, feedback
Barriers	**Transparency**: information sharing
	Communication: unidirectional, bidirectional, formal, informal, free-form, volume
	Reputation: organization status
	Competition between partners: funding, reach/expansion
	Resources: time, staff, funding
	Organization functioning: isolation, proximity, efficiency, stability, feedback
Satisfaction	**Reciprocity:** experiencing give and take
	Boundaries and Scope: prioritizing, maintaining, protecting, crossing, expanding
	Expansion of network: change in contacts and resources
	Validation: valuing partners' contributions
	Services: administrative, caregiving
Dissatisfaction	**Reciprocity:** experiencing give and take
	Boundaries and Scope: prioritizing, maintaining, protecting, crossing, expanding
	Expansion of network: change in contacts and resources
	Validation: valuing partners' contributions
	Services: administrative, caregiving
Impact	**Organization functioning:** isolation, proximity, efficiency, stability, feedback
	Access: change in resources, academic affiliations, populations
	Improving health disparities
	Workforce Development (expertise and learning)
	Improving quality of life

Table 3. Descriptive Statistics and Bivariate Relationship of Resource Adequacy and Partnership Characteristics with Perceived Success (n=37 surveys)

				Success (Above Mean ≥ 8)		
	Mean Ranking	**Standard Error**		**Odds Ratio (OR)**	**95% CI**	**p-value**
Success (1-8; 8=best)	8.14	0.32				
Resources (1-5; 5=best)						
Overall	**4.12**	**0.12**		**4.56**	**1.15-18.00**	**0.031**
Personnel	4.1	0.13		4.24	0.95-18.97	0.059
Physical	**4.09**	**0.14**		**5.25**	**1.39-19.75**	**0.014**
Material	4.07	0.2		3.26	0.87-12.22	0.079
Partnership Characteristics (1-7; 7=best)						
Governance	**6.13**	**0.19**		**7.97**	**1.94-32.82**	**0.004**
Administration	**5.87**	**0.21**		**6.17**	**1.83-20.72**	**0.003**
Autonomy	6.42	0.23		1.9	0.98-3.66	0.056
Mutuality	**6**	**0.19**		**7.89**	**2.15-28.95**	**0.002**
Norms/trust	**6.35**	**0.2**		**17.97**	**1.56-206.46**	**0.02**