

## **Crossing the Threshold: Developing a Foundation for University-Community Partnership**

**Eric Gass \***

Medical College of Wisconsin

### **Abstract**

*University-community partnerships are a relatively new phenomenon in higher education. Several sets of principles of partnership have been developed in the last decade. However, no attempt has been made to assess the process through which individuals and organizations come together to form a university-community partnership. This study surveyed medical school faculty and community partners participating in active partnerships. Results show that the threshold dimensions of trust and respect, communication, and mutual understanding of assets and deficits form the foundation of a university-community partnership model, and predict successful progress toward the next phase of the model.*

(\*Eric Gass, Ph.D, Assistant Professor, Department of Family and Community Medicine, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI 53226, Phone: 414-456-8767, Email: [egass@mcw.edu](mailto:egass@mcw.edu))

### **Principles of University-Community Partnerships**

The primary focus of this paper is to identify the essential dimensions of university-community partnerships. Specifically, this paper will examine the theory that the dimensions of trust, respect, communication and mutual understanding of assets and deficits form the foundation of a university-community partnership. It is proposed that university-community partners which have threshold levels of trust, respect, communication and mutual understanding of assets and deficits will agree to formalize the partnership and begin the process of developing a governance structure, allocate resources, create partnerships goals and mission statement, and develop a partnership progress assessment system.

There have been several attempts by scholars to define the characteristics, principles, or dimensions, of university-community partnerships. The first set of dimensions defined by Israel and colleagues (1998) are:

1. University recognizes the community as a unit of identity
2. Build on strengths and resources within the community
3. Facilitate collaborative partnerships in all phases
4. Integrate knowledge and action for mutual benefit of all partners
5. Promote co-learning and empowering process that attends to social inequalities
6. Involve a cyclical and iterative process
7. Address health from both positive and ecological perspectives
8. Disseminate findings and knowledge gained to all partners

Lasker (Lasker, Weiss, and Miller, 2001) uses the term “synergy” to describe partnerships. Lacking a definition of “the mechanism that enables partnerships to accomplish more than individuals and organizations...” and “seeking a pathway through which partnership functioning influences partnership effectiveness”, synergy is the concept that attempts to fill the void (Lasker et al., 2001). The combined perspectives, resources, and skills of each organization in the partnership create synergy, which then creates a new entity that is greater than the individual components (Lasker et al., 2001). The determinants of synergy are outlined in Table 1.

**Table 1: Determinants of Partnership Synergy**

Resources	Money; space, equipment, goods; skills and expertise; information; connections to people; organizations, and groups; endorsements; convening power
Partner Characteristics	Heterogeneity; level of involvement
Relationships Among Partners	Trust; respect; conflict; power differentials
Partnership Characteristics	Leadership; administration and management; governance; efficiency
External Environment	Community characteristics; public and organizational policies

Source: Lasker et al., 2001

Seifer and Maurana (2000) developed a set of partnership principles in conjunction with Community-Campus Partnerships for Health, a professional membership association for health partnerships. Their nine principles are:

1. Partners have agreed upon mission, values, goals, and measurable outcomes for the partnership
2. The relationship between partners is characterized by mutual trust, respect, genuineness and commitment
3. The partnership builds upon identified strengths and assets, but also addresses areas that need improvement
4. The partnership balances the power among partners and enables resources among partners to be shared
5. There is a clear, open, and accessible communication between partners, making it an ongoing priority to listen to each need, develop a common language, and validate/clarify the meaning of terms
6. Roles, norms, and processes for the partnership are established with the input and agreement of all partners
7. There is feedback to, among and from all stakeholders in the partnership, with the goal of continuously improving the partnership and its outcomes
8. Partners share the credit for the partnerships accomplishments
9. Partnerships take time to develop and evolve over time

The final model to be reviewed was developed by Holland (2004). Her list is relevant in that these characteristics focus on the concept of mutual benefit. While leadership, financial resources, and partnership agreement documents are important, this list of characteristics focuses on mutual outcomes and collaboration. The seven characteristics are outlined below:

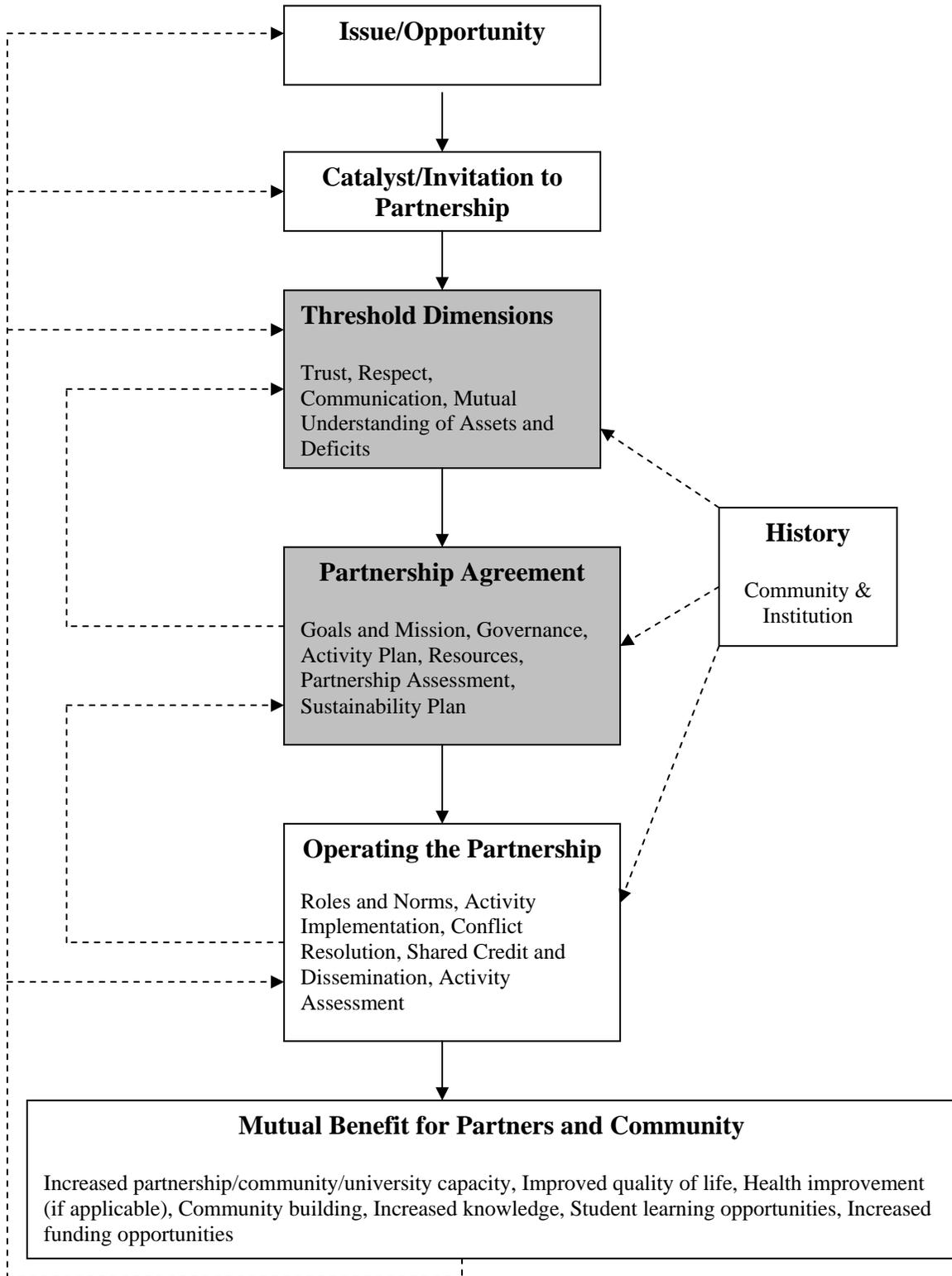
1. Joint exploration of goals and interests
2. Creation of a mutually rewarding agenda
3. Emphasis on positive consequences for each partner
4. Identification of opportunities for early successes
5. Focus on knowledge exchange, shared learning, and capacity building
6. Attention to communication, cultivation of trust
7. Commitment to continuous assessment of the partnership, as well as outcomes

While there is generally some overlap, not all of the models include the same concepts across the board. In addition, the sets of principles are presented in a way that does not reflect the temporal or dynamic nature of relationships. The next section of this paper will take the dimensions of partnership outlined in the literature, and create a theoretical model that reflects the longitudinal nature of university-community partnerships. Specific attention will be paid to early partnership formation, specifically the threshold dimensions described below.

#### **New Model of University-Community Partnerships**

Figure 1 presents a new, theoretical model of university-community partnerships. The new model takes partnership dimensions, creates linkages between them, producing a process through which partnerships develop, encounter, and potentially resolve issues at different stages. It is proposed that in order to be successful, partnerships will address the dimensions in the order outlined, before moving on to the next stage. For example, it is proposed that partnerships revolve around some issue in the community. The issue can be health-related, such as diabetes prevention, education, crime prevention, the training of college students, or anything that both partners can agree upon. Secondly, this model posits an explanation or catalyst that leads to the formation of the partnership. In some cases, a university or community agency decides that in order to best address the issue, engaging a partner would increase the chances of success. However, other factors can come into play, such as funders, which may require a partnership to be eligible for a grant.

Figure 1: The Path to University-Community Partnership



At this point, the partners are in the process of getting to know one another and beginning to determine if the partnership has what it takes to take action on the issue. The partners then address the threshold dimensions: trust, respect, communication, and mutual understanding of assets and deficits. These dimensions proposed to be inherent in successful partnerships and are non-negotiable. An individual or organization does not decide if or how to trust or respect another person or organization. Assets and deficits are present; they cannot be created through negotiation. Trust and respect can increase through the actions of other partners or through communication. Communication is not negotiated or planned like an evaluation or budget. What a partner says and how they say it impacts the partnership. Through honest communication, partners learn about one another, about their respective organizations, and make the decision to move forward.

The next step for the partnership is to come to an agreement, either a written document or a verbal commitment based upon trust and mutual understanding (Seifer and Maurana, 2000). This is the formalizing of the partnership, and the tangible evidence of the next major step process. The partnership agreement is developed through negotiation of the goals and mission of the partnership, creation of a governance structure, community-based activities, a partnership assessment plan, and a plan for sustaining the partnership, if desired. After the negotiations are completed, and the participating organizations agree to form a partnership, the operation of the partnership can get underway. It is proposed that the final outcome of this process are results that provide benefit for the community partners, the university, and the population for which the activities were designed.

The purpose of proposing this model is to build upon the work of Maurana, Israel, Lasker, Holland and others, who have attempted to identify the necessary dimensions of university-community partnerships. Their work is the foundation of this model. The Campus Compact group has issued a challenge to experts in the field to develop indicators of partnership success (Campus Compact, 2004). Other's point out that traditional assessment tools and methodologies do not adequately measure partnerships (Weiss, Anderson, and Lasker, 2002). Thus, a research plan has been developed to empirically test the new model of partnership.

## **Methods**

### **Participants**

A total of 23 partnerships were awarded grants by a statewide community-health foundation in 2004. Per grant rules, partnerships were to take place within one Midwestern state, and include at least one faculty member from a medical school and one community-based partner. In terms of partnership participants, there were a total of 35 faculty and 90 community partners, representing 85 unique community organizations.

### **Partnership Characteristics**

Characteristics for the funded partnerships were obtained from a review of the grant proposal documents. Table 2 provides a breakdown of the characteristics. For faculty partners, the majority were affiliated with the three primary care disciplines of Family Medicine, General Internal Medicine and Pediatrics. Sixty-nine percent (24 of 35) of faculty partners held appointments in a primary care discipline.

Community partners were broken down into six categories: social service agencies, state/local government, healthcare providers, other universities, religious institutions, and schools. Thirty-nine percent (33 of 85) of community partners represented social service agencies. State and local government had the second-most community partners at 21% (18 of 85). The overwhelming majority of government partners are employed at county health departments. Healthcare providers accounted for the third most community partners at 18% (15 of 85). Also, 10% (9 of 85) of the community partners came from universities other than the medical school. Three universities, all from same county as the medical school, provided partners from predominantly clinical departments such as nursing or dentistry.

Seventeen of the 23 funded partnerships had at least one faculty partner and one community partner complete the quantitative survey for this study. Comparisons between the partnerships that had both faculty and community partners respond (respondents) and those partnerships that did not have at least a pair of survey completers (non-respondents) were performed to check for statistically significant differences between the groups. The results are shown in Table 3.

**Table 2: Partnership Characteristic Table**

Total Number of Partnerships	23 Total
Total Faculty Partners/Staff Listed as Lead Partners	35 Total 28 one partnership 7 two partnerships
Total Medical School Departments Represented	14 Total 4-primary care (24 faculty/staff) 4-specialties (4 faculty/staff) 5-academic/research (5 faculty/staff) 1 clinic (2 faculty)
Total Community Lead Partners	90 Total 87 one partnership 3 two partnerships
Total Community Agencies Represented	85 Total 33-social service agencies 18-state/local government 15-healthcare providers 9-other universities 8-religious institutions 2-schools
Average Number of Partners Per Partnership	5.6 Total 1.5 Faculty Total 4.1 Community Total

In looking at faculty partners, no statistically significant differences were found between respondents and non-respondents in terms of department affiliation or number of faculty per partnership.

A similar result was found among community partners. No statistically significant differences were found between respondents and non-respondents in terms of type of community-based organization or numbers of community partners per partnership.

### **Survey Data Collection**

A survey (Table 4) was developed as a quantitative tool to assess the dimensions that may be present in their partnership. A total of 125 surveys were mailed to faculty and community partners. A total of 65 completed surveys were returned for an overall response rate of 52%. Community partners completed 42 surveys, accounting for 47% of the community partner population, while faculty completed 23 surveys, accounting for 66% of the population.

**Table 3: Survey Respondents vs. Non-Respondents**

	<b>Respondents</b>	<b>Non-Respondents</b>
Total Medical School Departments Represented  Chi-square=N.S.	Primary Care n=17 (74%) Specialties n=1 (4%) Academic/Research n=3 (13%) Clinic n=2 (9%)  Total n=23	Primary Care n=7 (58%) Specialties n=3 (25%) Academic/Research n=2 (17%) Clinic n=0 (0%)  Total n=12
Total Community Agencies Represented  Chi-square=N.S.	Social Service n=14 (37%) State/Local Govt. n=10 (26%) Healthcare Providers n=8 (21%) Other Universities n=4 (11%) Religious Institutions n=2 (5%) Schools n=0 (0%)  Total n=38	Social Service n=19 (40%) State/Local Govt. n=8 (17%) Healthcare Providers n=7 (15%) Other Universities n=5 (11%) Religious Institutions n=6 (13%) Schools n=2 (4%)  Total n=47
Average Number of Partners Per Partnership  t-test=N.S.	Faculty partners=1.6 Community partners =3.8  n=17	Faculty partners=1.0 Community Partners =4.8  n=6

### **Regression Analyses**

A series of logistic regressions were performed to test the relationships between the threshold dimensions and partnership agreement dimensions. The variables representing the threshold dimensions were individually regressed upon each of variables associated with the partnership agreement dimensions, to assess the unique variance for each independent variable. In addition, all of the independent threshold dimensions variables were entered into a regression model simultaneously, and regressed upon the dependent partnership agreement variables to assess the overall variance accounted for by the threshold dimensions as a whole.

For this research project,  $p < .10$  was labeled statistically significant. The maximum sample size for community partners is 42 and for faculty, the maximum sample size is 23. Considering the lack of statistical power between these two samples, achieving the standard significance level needed to reject the null hypothesis of  $p < .05$  will be difficult. Thus, the use of  $p < .10$  will allow for the greater discussion of differences that may exist. This study was reviewed and approved by the Institutional Review Board of the University of Wisconsin-Milwaukee.

### **Variable Recoding-Compensating for Skewness**

The first data analysis step was to examine how, and in which direction, the distributions for each variable are skewed. A rule of thumb in determining if data are skewed is to compare the absolute values of skewness with two times the standard error of skewness (Brown, 1997). If absolute skewness is greater than two-times the standard error of skewness, the distribution is significantly skewed. The results of this analysis are shown in Table 4. Question 20 on the survey was not included in any analyses. After reviewing the literature and the theory behind the partnership model, assessing the inclusion of new partners was not relevant to this study. Of the 20 variables to be analyzed in this study, 15 are shown to have a significant skew. Also, all 20 of the variables have a negative skew, indicating that the majority of the responses are clustered on the high end of the ordinal numeric scale.

Due to the skewness found in the data, and the fact that all of the variables were written at the ordinal level, it was determined that recoding the data would allow the variables to be utilized in the appropriate type of analysis. Therefore, the 20 partnership dimension variables to be analyzed in this study were recoded into “1-0” binomial variables.

Theoretically relevant variables were assessed for multicollinearity using the Spearman’s Rho correlation statistic. When assessing multicollinearity, a correlation of .90 or greater, or several correlations of .70 or greater, show that the independent variables are collinear (Garson, 2006). None of the correlations among the dichotomous variables achieved the level of multicollinearity. However, statistically significant correlations were used as evidence to create aggregate variables in an effort to reduce the number of variables in the regression equations. Table 5 shows Spearman’s Rho correlation results, the criteria used to create the new aggregate variable, and the name of the aggregate variable.

In addition to creating aggregate variables, the variable Documentation was dropped from the regression analyses. In an effort to reduce the number of variables in the equation, it was determined that keeping notes of meetings and documenting communications was not as theoretically relevant as other Threshold Dimension variables.

**Table 4: Skewness All Variables**

	<b>Skewness</b>	<b>St. Error of Skewness</b>
<b>Threshold Dimensions</b>		
<b>Trust and Respect</b>		
1. To what extent has a climate of trust and respect developed in this partnership?	-1.730*	.297
2. How much do the other partners appreciate and value the contributions you and your organization make to the partnership?	-2.546*	.297
<b>Communication</b>		.297
3. To what extent is the work of the partnership formally documented in meeting minutes, notes, and agendas?	-1.340*	.299
4. How often does the partnership have regular meetings with non-partners such as constituents, stakeholders and clients?	-.678*	.297
5. How often is information shared among partners in a way that is accessible and understandable to all partners?	-1.794*	.297
<b>Mutual Understanding of Assets and Deficits</b>		
6. As a result of working in the partnership, have you become more aware of the needs of the people your partnership serves?	-3.736*	.297
7. As a result of working in the partnership, have you become more aware of the assets/strengths of the people your partnership serves?	-2.591*	.297
8. To what extent did the partners assess each other's capabilities when planning the activities outlined in the grant proposal?	-.598	.302
9. As a result of participating in the partnership, to what extent has your understanding of your own organizations' strengths and weaknesses been enhanced?	-.700*	.297
10. To what extent has participating in the partnership affected your understanding of other partner organization strengths and weaknesses?	-.528	.297
<b>Partnership Agreement Dimensions</b>		
<b>Goals and Mission</b>		
11. How clear are the mission and priorities of your partnership?	-1.415*	.299
12. How much do the mission and priorities of your organization align with those of the partnership?	-.980*	.297
<b>Governance</b>		
13. Do the partners have mutually understood rules for making decisions?	-1.394*	.299
14. How much influence does your organization have in partnership decision-making?	-1.600*	.299
<b>Resources</b>		
15. How much opportunity did you and your organization have to participate in developing the partnership budget?	-1.347*	.302
16. To what extent did you and your organization understand the budget resources available to you through the partnership, at the time the proposal was submitted?	-1.218*	.299

	<b>Skewness</b>	<b>St. Error of Skewness</b>
17. In terms of the overall partnership, how sufficient are the grant resources awarded to the partnership with regard to achieving the goals and mission outlined in the proposal?	-.510	.297
18. How sufficient are the resources your organization has received to implement the activities assigned to you in the partnership?	-.264	.302
<b>Partnership Assessment</b>		
19. To what extent does the partnership regularly review its activities against the goals and mission of the partnership?	-1.688*	.297
<b>Not included in partnership model</b>		
20. Has your partnership brought on any new partners? If yes, who are they and what are they contributing?	N/A	N/A
<b>Sustainability Plan</b>		
21. Has the partnership made plans to sustain the program beyond the period of this grant?	-.197	.302

\* significant skewness=standard error of skewness x

**Table 5: Multicollinearity Results**

Survey Items	Spearman's Rho	Criteria to Create Dichotomous Aggregate Variable	New Variable
<b>Threshold Dimensions</b>			
Perception of Trust Valued Contributions	.61***	Perception of Trust+Valued Contributions=2	Trust and Respect
Community Needs Awareness Community Asset Awareness	.53***	Comm Needs Aware+Comm Asset Aware=2	Community Awareness
Self Assessment Understanding Partner Capacity	.22*	Self Assess+Understanding Partner Capacity=1	Understanding Capacity
<b>Partnership Agreement Dimensions</b>			
Mission Clarity Mission Alignment	.26**	Mission Clarity+Mission Alignment=2	Partnership Mission
Budget Participation Budget Understanding	.39**	Budget Participation+Budget Understanding=2	Budget Process
Partnership Sufficiency Organizational Sufficiency	.39***	Prtnrsh Sufficiency+Org Sufficiency=2	Funding Sufficiency

\*p<.10, \*\*p<.05, \*\*\*p<.01

## Results

Table 6 shows that independently, Trust and Respect ( $\text{Exp}(B)=5.61$ ,  $p<.05$ ), Common Language ( $\text{Exp}(B)=3.49$ ,  $p<.10$ ) and Community Awareness ( $\text{Exp}(B)=8.87$ ,  $p<.05$ ) contribute statistically significant variance to the dependent variable Partnership Mission for a total of  $\text{Pseudo-R}^2=.183$ .

It should be noted that the variables of Partner Assessment and Understanding Capacity were not statistically significant. Thus understanding the strengths and weaknesses of the community is more relevant to Partnership Mission than understanding the strengths and weaknesses of the organizations participating in the partnership. When all of the variables were simultaneously entered into a logistic regression model, only two variables were statistically significant, Trust and Respect ( $\text{Exp}(B)=5.67$ ,  $p<.10$ ) and Community Awareness ( $\text{Exp}(B)=9.92$ ,  $p<.10$ ) for a total of  $\text{Pseudo-R}^2=.163$ . The statistical significance shown by Common Language independently is gone. It is possible that Community Awareness mediates the process of communicating in a clear and understandable way among the partners, such that, communication serves to educate the partners about the needs and assets of the target population.

The next dependent variable, representing the partnership dimension of governance, is Partnership Rules (Table 6). Four independent variables contributed unique variance in the dependent variable. The statistically significant variables are Trust and Respect ( $\text{Exp}(B)=9.78$ ,  $p<.01$ ), Outside Communication ( $\text{Exp}(B)=8.70$ ,  $p<.01$ ), Common Language ( $\text{Exp}(B)=9.78$ ,  $p<.01$ ), and Partner Assessment ( $\text{Exp}(B)=3.93$ ,  $p<.10$ ) for a total of  $\text{Pseudo-R}^2=.535$ .

As was the case with the previous analyses, all three threshold dimensions independently contribute variance to the dependent variable. Summed up, these four variables independently account for over 53% of the variance for Partnership Rules. However, when entered simultaneously in a logistic regression model, Trust and Respect and Partner Assessment are no longer statistically significant. Also, a large reduction in overall variance is found, from  $\text{Pseudo-R}^2=.535$  to  $\text{Pseudo-R}^2=.306$ . In addition, the significance shown by Common Language ( $\text{Exp}(B)=4.96$ ,  $p<.10$ ) decreases. When all of the variables are regressed together, Outside Communication ( $\text{Exp}(B)=8.98$ ,  $p<.05$ ) becomes the strongest predictor of Partnership Rules. This result could be interpreted as communication, both with partners and stakeholders, is the

**Table 6: Threshold Dimension Variables Regressed Upon Partnership Agreement Variables**

	<b>Partnership Mission</b>			<b>Partnership Rules</b>	
	<b>Unique Variance</b>	<b>Full Model n=61</b>		<b>Unique Variance</b>	<b>Full Model n=61</b>
	<b>Exp(B)</b>	<b>Exp(B)</b>		<b>Exp(B)</b>	<b>Exp(B)</b>
<b>Trust and Respect</b>			<b>Trust and Respect</b>		
n=64, R <sup>2</sup> =.077	5.61**	5.67*	n=64, R <sup>2</sup> =.170	9.78***	2.08
<b>Communication</b>			<b>Communication</b>		
<b>Outside Communication</b>			<b>Outside Communication</b>		
n=63, R <sup>2</sup> =.002	1.21	0.49	n=63, R <sup>2</sup> =.143	8.70***	8.98**
<b>Common Language</b>			<b>Common Language</b>		
n=64, R <sup>2</sup> =.043	3.49*	1.96	n=64, R <sup>2</sup> =.170	9.78***	4.96*
<b>Mutual Understanding of Assets and Deficits</b>			<b>Mutual Understanding of Assets and Deficits</b>		
<b>Community Awareness</b>			<b>Community Awareness</b>		
n=64, R <sup>2</sup> =.063	8.87**	9.92*	n=64, R <sup>2</sup> =.017	2.45	0.41
<b>Partner Assessment</b>			<b>Partner Assessment</b>		
n=62, R <sup>2</sup> =.021	2.10	0.91	n=62, R <sup>2</sup> =.052	3.93*	2.30
<b>Understanding Capacity</b>			<b>Understanding Capacity</b>		
n=64, R <sup>2</sup> =.013	1.73	2.44	n=64, R <sup>2</sup> =.002	0.79	0.72
		<b>R<sup>2</sup> = .163</b>			<b>R<sup>2</sup> = .306</b>

\*p<.10, \*\*p<.05, \*\*\*p<.01

key to partnership governance. While trust, respect, and assessing partner capacity are important independently, communication mediates the process of building trust, respect and sharing strengths and weaknesses. Communication with outside stakeholders may also provide information about the strengths and weaknesses of partner organizations. Colleagues in the community may have previous experience with a particular partner and pass that information along in conversation outside of the formal partnership.

The third dependent variable is Partnership Influence (Table 7). Only one independent variable, Partner Assessment ( $\text{Exp(B)}=2.91$ ,  $p<.10$ ), had a statistically significant relationship with Partnership Influence for a total of  $\text{Pseudo-R}^2=.041$ . When all of the variables are entered simultaneously into the logistic regression model, the results change drastically. In this case, two independent variables, Outside Communication ( $\text{Exp(B)}=.026$ ,  $p<.05$ ) and Understanding Capacity ( $\text{Exp(B)}=3.23$ ,  $p<.10$ ) had a statistically significant relationship with Partnership Influence with the entire model showing a total of  $\text{R}^2=.141$ . As opposed to the previous analyses, all of the threshold dimensions together show a stronger predictive relationship with Partnership Influence than the individual variables do independently. Also, when looking at all of the threshold dimensions combined, it can be concluded that partners came to understand their own strengths and weaknesses, and the strengths and weaknesses of their partners, are three times more likely to perceive that their organization has an influence in partnership decision making.

The next dependent variable, representing the partnership dimension of resources, is Budget Process. As shown in Table 7, one variable had a statistically significant relationship with Budget Process when assessed independently, that being Understanding Capacity ( $\text{Exp(B)}=2.64$ ,  $p<.10$ ). When all of the independent variables were entered into the logistic regression model simultaneously, two variables showed statistically significant results. Again, Understanding Capacity ( $\text{Exp(B)}=4.52$ ,  $p<.05$ ) showed a statistically significant relationship with the dependent variable Budget Process. In addition, the independent variable Common Language ( $\text{Exp(B)}=17.33$ ,  $p<.05$ ), showed a statistically significant odds ratio when entered into the regression model simultaneously with the other independent variables.

**Table 7: Threshold Dimension Variables Regressed Upon Partnership Agreement Variables-2**

	<b>Partnership Influence</b>			<b>Budget Process</b>	
	<b>Unique Variance</b>	<b>Full Model n=62</b>		<b>Unique Variance</b>	<b>Full Model n=62</b>
	<b>Exp(B)</b>	<b>Exp(B)</b>		<b>Exp(B)</b>	<b>Exp(B)</b>
<b>Trust and Respect</b>			<b>Trust and Respect</b>		
n=64, R <sup>2</sup> =.023	2.37	2.13	n=63, R <sup>2</sup> =.000	0.87	0.23
<b>Communication</b>			<b>Communication</b>		
<b>Outside Communication</b>			<b>Outside Communication</b>		
n=63, R <sup>2</sup> =.024	0.47	0.26**	n=62, R <sup>2</sup> =.004	0.74	0.44
<b>Common Language</b>			<b>Common Language</b>		
n=64, R <sup>2</sup> =.023	2.37	2.84	n=63, R <sup>2</sup> =.041	3.80	17.33**
<b>Mutual Understanding of Assets and Deficits</b>			<b>Mutual Understanding of Assets and Deficits</b>		
Community Awareness			Community Awareness		
n=64, R <sup>2</sup> =.000	0.86	0.63	n=63, R <sup>2</sup> =.004	1.58	1.21
<b>Partner Assessment</b>			<b>Partner Assessment</b>		
n=63, R <sup>2</sup> =.041	2.91*	2.01	n=63, R <sup>2</sup> =.000	1.00	0.69
<b>Understanding Capacity</b>			<b>Understanding Capacity</b>		
n=64, R <sup>2</sup> =.023	2.10	3.23*	n=63, R <sup>2</sup> =.040	2.64*	4.52**
		<b>R<sup>2</sup> = .141</b>			<b>R<sup>2</sup> = .166</b>

\*p<.10, \*\*p<.05, \*\*\*p<.01

The fifth partnership agreement construct to serve as a dependent variable is Funding Sufficiency, also representing the partnership dimension of resources, as shown in Table 8. No independent variable had a statistically significant relationship with Funding Sufficiency when regression analyses were performed.

Partnership Assessment is the next partnership agreement dimension to serve as a dependent variable (Table 8). Three independent variables had statistically significant relationships with Partnership Assessment when assessed in individual logistic regression analyses. Trust and Respect (Exp(B)=4.76,  $p < .05$ ), Outside Communication (Exp(B)=3.57,  $p < .05$ ), and Common Language (Exp(B)=11.92,  $p < .01$ ) accounted for a large portion of total variance, Pseudo- $R^2 = .310$ , when assessed independently. When all of the threshold dimensions variables are entered into a logistic regression model simultaneously, both Trust and Respect and Outside Communication are no longer statistically significant. Only Common Language (Exp(B)=11.06,  $p < .05$ ), maintains a statistically significant odds ratio. Also, there is a large decrease in the total amount of variance accounted for in the model, Pseudo- $R^2 = .208$ .

It may be the case where open and clear communication is most essential to the process of assessing the partnership. While a culture of trust and respect is important, and reporting back to stakeholders about the partnership may be necessary for some of the participants, when assessed as a whole, the key to continuous assessment of the partnership is the communication process among the partners.

Also shown in Table 9, the final partnership agreement dimension to serve as a dependent variable is Sustainability Plan. No independent variable had a statistically significant relationship with Sustainability Plan when regression analyses were performed.

### **Discussion**

To review the concepts behind the threshold dimensions, it is theorized that Trust, Respect, Communication, and Mutual Understanding of Assets and Deficits form the foundation of the partnership model. The term threshold was selected to reflect the nature of these dimensions.

**Table 8: Threshold Dimension Variables Regressed Upon Partnership Agreement Variables-3**

	<b>Funding Sufficiency</b>			<b>Partnership Assessment</b>	
	<b>Unique Variance</b>	<b>Full Model n=61</b>		<b>Unique Variance</b>	<b>Full Model n=62</b>
	<b>Exp(B)</b>	<b>Exp(B)</b>		<b>Exp(B)</b>	<b>Exp(B)</b>
<b>Trust and Respect</b>			<b>Trust and Respect</b>		
n=63, R <sup>2</sup> =.002	1.32	0.47	n=65, R <sup>2</sup> =.074	4.76**	0.60
<b>Communication</b>			<b>Communication</b>		
<b>Outside Communication</b>			<b>Outside Communication</b>		
n=63, R <sup>2</sup> =.006	1.46	1.68	n=64, R <sup>2</sup> =.067	3.57**	3.11
<b>Common Language</b>			<b>Common Language</b>		
n=63, R <sup>2</sup> =.018	2.40	3.43	n=65, R <sup>2</sup> =.169	11.92***	11.06**
<b>Mutual Understanding of Assets and Deficits</b>			<b>Mutual Understanding of Assets and Deficits</b>		
<b>Community Awareness</b>			<b>Community Awareness</b>		
n=63, R <sup>2</sup> =.000	1.02	0.44	n=65, R <sup>2</sup> =.033	3.61	1.09
<b>Partner Assessment</b>			<b>Partner Assessment</b>		
n=61, R <sup>2</sup> =.003	1.31	1.36	n=63, R <sup>2</sup> =.028	2.40	1.79
<b>Understanding Capacity</b>			<b>Understanding Capacity</b>		
n=63, R <sup>2</sup> =.002	1.24	1.68	n=65, R <sup>2</sup> =.002	0.82	0.90
		<b>R<sup>2</sup> = .043</b>			<b>R<sup>2</sup> = .208</b>

\*p<.10, \*\*p<.05, \*\*\*p<.01

**Table 9: Threshold Dimension Variables Regressed Upon Partnership Agreement Variables-4**

	<b>Sustainability Plan</b>	
	<b>Unique Variance</b>	<b>Full Model n=62</b>
	<b>Exp(B)</b>	<b>Exp(B)</b>
<b>Trust and Respect</b> n=63, R <sup>2</sup> =.008	1.72	2.27
<b>Communication</b> <b>Outside Communication</b> n=62, R <sup>2</sup> =.004	0.74	0.48
<b>Common Language</b> n=63, R <sup>2</sup> =.000	1.06	0.74
<b>Mutual Understanding of Assets and Deficits</b> <b>Community Awareness</b> n=63, R <sup>2</sup> =.016	3.08	3.98
<b>Partner Assessment</b> n=61, R <sup>2</sup> =.009	1.61	1.31
<b>Understanding Capacity</b> n=63, R <sup>2</sup> =.008	1.53	1.26
		<b>R<sup>2</sup> = .053</b>

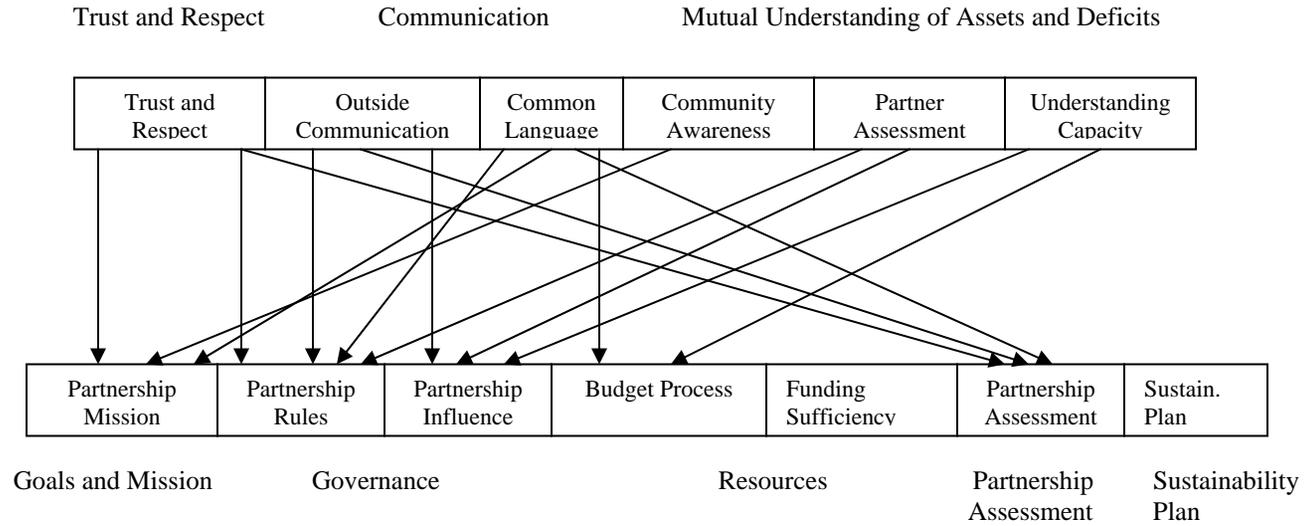
\*p<.10, \*\*p<.05, \*\*\*p<.01

Threshold means the minimum level or amount required to produce perception or acknowledgement of a stimuli. In this case, the stimuli are perceptions of partnership dimensions. If a partner perceives acceptable minimum levels of trust and respect, open and honest communication, has an understanding of the community, and the abilities of the other partners, it is proposed that the partnership will move forward, developing such dimensions as governance structure, mission and goals, activities in the community, and budgets.

In terms of the model, at least one of the variables that operationalized each of the threshold dimensions had a statistically significant relationship with at least one of the partnership agreement dimensions. Thus, a conclusion can be made that, according to this proposed model, the concept of threshold dimensions serving as the bedrock, or foundation, of the partnership, has merit. The results are summarized in Figure 2 and Table 10.

**Figure 2: Relationships Between Threshold Dimensions and Partnership Agreement Dimensions**

**Threshold Dimensions**



**Partnership Agreement Dimensions**

**Table 10: Relationships Between Threshold Dimensions and Partnership Agreement**

**Dimensions**

<b>Independent Variables:</b> Threshold Dimensions	<b>Dependent Variables:</b> Partnership Agreement Dimensions
Partnerships with high levels of trust and respect lead to...	...the development of clear goals and mission for the partnership that align with the goals and mission of partner organizations, the development of clear rules for partnership decision making, and the development of a partnership progress assessment.
Partners that communicate with stakeholders and constituents from outside the partnership will lead to...	...the development of clear rules for partnership decision making, the perception of having an influence in partnership decision-making, and engage in a regular partnership progress assessment.
Partners that communicate with each other in an accessible and understandable manner will lead to...	...the development of clear goals and mission for the partnership that align with the goals and mission of partner organizations, the development of clear rules for partnership decision making, a budget development process that includes, and is understood, by all partners, and the mutual development of a partnership progress assessment.
Partners that are aware of the needs and assets of the target population in the community will lead to...	...the development of clear goals and mission for the partnership that align with the goals and mission of partner organizations.
Partners that assess each other's strengths and weaknesses when planning the activities of the partnership will lead to...	...the development of clear rules for partnership decision making, the perception of having an influence in partnership decision-making.
Partners that have gained an understanding of the strengths and weaknesses of their organization, and the strengths and weaknesses of their partners, through participating in the partnership will lead to...	... the perception of having an influence in partnership decision-making, and a budget development process that includes, and is understood, by all partners.

One interesting finding among the regression models was that understandable communication among partners and understanding the capacity of organizations within the partnership leads to an understanding of the resources available to the partnership and a budget that is developed by all partners. This finding is very logical in that, communicating with the partners about the budget process ensures participation in the development process and can maximize the opportunity to have funds come to specific organizations. Understanding the capacity of the organizations that make up the partnership will help determine where the funds are allocated.

Funds may be awarded to the organization with expertise in a particular area, to fulfill a specific part of the partnership mission. To understand that expertise, organization will communicate openly and honestly, about their strengths and weaknesses, to ensure that the funds are allocated appropriately.

There were many statistically significant relationships between the threshold dimensions and the partnership agreement dimensions. This was expected considering where the partnerships were in their lifecycle at the time data was collected. The partnerships should have already addressed the threshold dimensions and partnership agreement dimensions. Thus, with some certainty, it can be concluded that the threshold dimensions, and their placement in the model, is theoretically and practically appropriate, and validates the decision to structure the model in this fashion. It should be noted that levels of trust, feeling respected or disrespected, communication, and organizational capacity can fluctuate throughout the life of the partnership. The actions of one partner may cause another to lose trust, while the capacity of organizations varies with staff turnover or funding changes. However, for the partnership to advance, threshold levels of these partnership dimensions are required before the partnership can proceed.

### **Limitations**

One of the limitations of this project is generalizability. Since it was required that medical school faculty serve as the academic partner, it could be argued that some of the partnerships did not develop “naturally”. In looking at the model, the catalyst to forming the partnership may have been the funding available; as opposed to truly deciding a partnership was the most appropriate format to address a community health issue. Thus, some of the partnerships studied for this project may have been forced for the sake of access to money.

In addition, the focus of these partnerships was specifically on health-related topics. Therefore, the issues a partnership could address were limited. While many non-health related organizations served as community partners, their level of expertise in certain topical areas may have impacted respondent’s view of the partnership. The dynamics of the partnership, and thus the potential data that could be collected, may be different if the topic was not health-focused.

Another limitation impacting generalizability is sample size. One hundred twenty-five was the maximum possible number of survey respondents. Sixty-five surveys were returned. While a 52% response rate for a survey conducted through the mail might be considered excellent, the sample size limits analytical options. To compensate for the small sample size, aggregate variables were created to ensure that some of the assumptions of logistic regression were met.

Creating aggregates may have reduced variation by merging survey items that were related to each other in theory, but still uniquely independent in terms of the operationalized construct.

In addition to merging variables, the recoding of the Likert scale responses into dichotomous impacted the variation in the survey items. In an effort to address two issues, ordinal level data and severe skewness in the outcome distributions of the survey data, the variables were recoded to compare the highest possible answer on a three or four-point scale against the rest of the response categories in the logistic regressions. Therefore, some of the relationships between the variables that were non-statistically significant in the regression model may, in fact, be statistically significant. With a larger sample size, and presumably more normally distributed data, a more detailed understanding of the dimensions of partnership may be obtained.

### **Conclusion**

This study is not the definitive conclusion on the process of partnership; it is just the beginning. This study showed that there is a discrete set of dimensions, or issues, which partnerships encounter as the relationship develops. Concepts such as trust, communication, organizational capacity, and assessment of strengths and weaknesses are the foundation of developing a partnership mission and governance structure, creating a budget, and establishing an assessment protocol to check on the progress of the partnership. Again, these findings are only the beginning. Taking this knowledge and applying it to future research studies, using it practically to help those working in partnerships to better manage the process, and providing feedback to funders will ensure that the partnership model will evolve, as our understanding of university-community partnerships continues to grow.

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