**Position Requirements & Skills Factor Analysis & Subscale Creation**

To retain a parsimonious model while still capturing relevant associations between partnerships and respondent’s positional requirements and skill, we conducted factor analyses. Since the variables of interest were categorical, exploratory factor analysis with a varimax rotation was conducted on the polychoric correlation matrix of the data (Pett, Lackey et al. 2003).

Three factors were retained for both positional requirements and respondent’s skills. All 18 of the positional requirements items loaded highly (> 0.5) onto one of three factors while 17 of 18 skill items loaded highly onto one of three factors. Of these six factors, four had Eigenvalues greater than 1; two had Eigenvalues less than one but were retained due to the conceptual completeness of capturing 35 of the 36 items and due to the fact that the cumulative percent of variance accounted for by the three factors was 100% for both positional requirements and skills.

Scales for the six variables were obtained by averaging the scores for the items with loadings greater than 0.5; items with loadings less than 0.5 were not included when calculating factor scores (Pett, Lackey et al. 2003).

*Table A1: Exploratory factor analysis and subscale creation for respondent’s positional requirements*

|  |  |  |  |
| --- | --- | --- | --- |
| **Factor** | **Eigen value** | **Clinical Service (Loading\*)** | **Descriptive Name** |
| 1 | 10.93 | * Collaborating with diverse communities to identify and solve health problems. * Addressing the needs of diverse populations in a culturally sensitive way. * Assessing the broad array of factors that influence specific public health problems. * Understanding the relationship between a new policy and many types of public health problems. * Engaging partners outside your health department to collaborate on projects. * Interpreting public health data to answer questions * Finding evidence on public health efforts that work * Applying evidence-based approaches to solve public health issues * Influencing policy development *(competency only)* | **Community Partnerships & Data** |
| 2 | 0.88 | * Communicating ideas and information in a way that different audiences can understand. (0.68) * Communicating in a way that persuades others to act. (0.66) * Engaging staff within your health department to collaborate on projects. (0.52) * Managing change in response to dynamic, evolving circumstances. (0.62) * Anticipating the changes in your environment (physical, political, environmental) that may influence your work. (0.53) * Gathering reliable information to answer questions (0.68) * Applying quality improvement concepts in my work (0.52) | **Management & Communication** |
| 3 | 0.70 | * Preparing a program budget with justification (0.79) * Ensuring that programs are managed within the current and forecasted budget constraints (0.78) | **Budgeting** |

*\*Loadings with absolute value less than 0.50 not shown and were not used in scale calculations*

*Table A2: Exploratory factor analysis and subscale creation for respondent’s skills*

|  |  |  |  |
| --- | --- | --- | --- |
| **Factor** | **Eigen value** | **Clinical Service (Loading\*)** | **Descriptive Name** |
| 1 | 9.60 | * Collaborating with diverse communities to identify and solve health problems. (0.74) * Addressing the needs of diverse populations in a culturally sensitive way. (0.55) * Assessing the broad array of factors that influence specific public health problems. (0.80) * Understanding the relationship between a new policy and many types of public health problems. (0.66) * Engaging partners outside your health department to collaborate on projects. (0.53) * Interpreting public health data to answer questions (0.72) * Finding evidence on public health efforts that work (0.80) * Applying evidence-based approaches to solve public health issues (0.81) | **Community Partnerships & Data** |
| 2 | 1.05 | * Communicating ideas and information in a way that different audiences can understand. (0.71) * Communicating in a way that persuades others to act. (0.70) * Engaging staff within your health department to collaborate on projects. (0.52) * Managing change in response to dynamic, evolving circumstances. (0.62) * Anticipating the changes in your environment (physical, political, environmental) that may influence your work. (0.67) * Gathering reliable information to answer questions (0.54) | **Management & Communication** |
| 3 | 0.86 | * Preparing a program budget with justification (0.82) * Ensuring that programs are managed within the current and forecasted budget constraints (0.82) | **Budgeting** |

*\*Loadings with absolute value less than 0.50 not shown and were not used in scale calculations*