

APPENDIX A: FROM START TO FINISH -- SAMPLE SCENARIOS OF USING AND/OR CONSTRUCTING SURVEY INSTRUMENTS

Appendix A includes two examples of how providers may use the survey instruments and/or their subscales included in this Guide. One example shows how a nursing home decided to measure one topic of interest (Job Design) among CNAs. The other illustrates how a continuing care retirement community (CCRC) constructed a multi-topic survey instrument from among the scales/subscales in the Guide. Both scenarios follow the steps laid out in Appendix C on data collection planning and implementation issues.

Measuring a Single Topic of Interest

Step #1: Purpose of data collection effort

A nursing home is experiencing high turnover among its CNAs. The Administrator wants to identify the parts of their jobs that CNAs are most concerned about and those that are least rewarding. Using this information, she would like to decide what actions management can take to try to address some of these problems.

Step #2: Specify the target population for data collection

CNAs in nursing home

Step #3: Determine project team, budget and schedule

The Administrator has started to call the nursing departments at local universities in an attempt to identify potential researchers with whom she can collaborate. She has also asked her Director of Human Resources to obtain price quotes from data collection vendors for conducting an employee survey of all 40 CNAs. Lastly, she has asked her Director of Finance to assess what kind of budget the organization has for staff development as she realizes she will have to act on the survey findings in order to maintain credibility among her CNAs. The survey fielding/data collection period will last for three weeks.

Step #4: Decide whether to include all members of the population or a sample

All 40 CNAs will be surveyed (a census).

Step #5: Decide the topics, subscales, and/or formulas on which to collect data

The nursing home Administrator has heard rumors about tension between CNAs and certain charge nurses. While she knows for certain that this topic area is one that her CNAs will be asked about, she really wants to keep the employee survey broad so she can really get at what may be causing the high CNA turnover she is experiencing.

Step #6: Decide how the questionnaire will be administered and set the response rate goal

The Administrator was able to form a relationship with a local researcher who will oversee the data collection process. Each CNA will receive an advance letter informing them of the survey and its goals. After the letters are distributed, a CNA staff meeting will be held to allow a question-and-answer period focused on the survey. The project team has determined that the survey will be administered by the researcher at pre-appointed times for each employee on each shift in a common area. Free food will be available in this common area during these times. A lock box will be placed in this room so that employees will feel comfortable responding. The goal is to have a 100 percent response rate among CNAs.

Step #7: Design and pretest the questionnaire

Together, the Administrator and researcher examined the instruments in the Guide around the topic areas of job satisfaction, job design and worker-supervisor relationships. Using the advice of her research collaborator, the Administrator has decided to keep the survey broad and use subscales of the Job Role Quality Questionnaire. She is particularly interested in assessing the degree to which her CNAs are concerned about the workplace environment and the degree to which they find certain aspects of their jobs rewarding in order to inform an appropriate organizational response. The JRQ includes five items to measure “job concern factors” and six items to measure “job reward factors.”

The Director of Nursing has recruited CNAs on each shift with whom the research collaborator, an objective outside source, will hold focus groups to get feedback on the length and content of the questionnaire.

Step #8: Monitor data collection

The researcher has agreed to provide frequent reports on response rates among the CNAs via email and phone calls with the Administrator, Director of Nursing, and Director of Human Resources. The survey will be conducted over a three-week period.

Step #9: Analyze data and present findings

Scores for each item in the eleven subscales were added across the 40 CNAs and then averaged. The results for each item are as follows:

Subscale averages for job concern factors (N = 40 CNAs)

– Overload	2.8	
– Dead-end job		2.5
– Hazard exposure	1.1	
– Poor supervision	3.4	
– Discrimination	1.4	

**For job concern factors, a lower score reflects better job design.*

Subscale averages for job reward factors (N = 40 CNAs)

– Helping others	3.8	
– Decision authority	3.0	
– Challenge	2.9	
– Supervisor support		1.8
– Recognition	1.9	
– Satisfaction with salary	2.2	

** For job reward factors, a lower score represents poorer job design.*

The results of the survey show that the Administrator's suspicion that the employee-supervisor relationships may need to be strengthened has been reinforced. Based on survey results, it appears that CNAs seem most concerned about the poor supervision they receive. They report the least rewarding parts of their jobs to be supervisor support and recognition they receive.

The Administrator and Director of Nursing are putting together a presentation for the next CNA staff meeting to report the survey results. At that time, they will solicit CNAs who would like to work on a team to develop a strategic plan for improving employee supervisor relationships and the overall work environment of the nursing home.

Constructing a Multi-Topic Survey Instrument

Step #1: Purpose of data collection effort

A CCRC wants to see how committed its employees are, how empowered they feel, and whether those who feel more empowered are more likely to be committed to their employer. The Administrator would like to see how employees' perceptions in these areas differ across department so that an informed organizational response can be developed.

Step #2: Specify the target population for data collection

A random sample of employees in all departments of a CCRC.

Step #3: Determine project team, budget and schedule

This CCRC has a research unit on campus, so the Administrator will work with the Director of Research on campus to develop a reasonable schedule. The Administrator will also coordinate with the Director of Finance so the appropriate distribution of resources across the CCRC and its research unit is clearly spelled out among all parties.

The team determined ahead of time that the survey will be administered in-person, since many of the employees are Spanish-speaking. Added expenses the team has already considered include the hiring of outside interpreters, time staff spends on completing surveys (and the overhead costs associated with a lengthy survey process as a result), and efforts to increase response rate. The survey fielding/data collection period will last six weeks, including survey administration and follow-up to improve response rate.

Step #4: Decide whether to include all members of the population or a sample

Given the cost of doing in-person interviews and the number of staff members at the CCRC, the Administrator and Director of Research decided to draw a random sample of the 1,100 employees at the CCRC. Employees from all departments, on all shifts will be included in the random sample. The research unit will ensure that enough employees are drawn from each department to make appropriate comparisons and to ensure confidentiality.

Step #5: Decide the topics, subscales, and/or formulas on which to collect data

The Administrator and department heads determined that organizational commitment and empowerment among employees were the topic areas most appropriate to focus on for this first employee survey. After looking at these topic areas in the Guide, the team narrowed their choices to the following scales and subscales: Intent to Turnover measure (behavioral intent to leave job) from the *Michigan Organizational Assessment Questionnaire* and three items from the opportunity subscale of the *Conditions for Work Effectiveness Questionnaire (CWEQ I) and (CWEQ II Short Form)*. A total of 6 items were chosen to keep the in-person survey short.

The specific items selected, which include entire subscales,¹ are:

Items from the *Michigan Organizational Assessment Questionnaire -- Intent to Turnover measure* (3 items):

Here are some statements about you and your job. How much do you agree or disagree with each? (Likert Scale ranging from 1-7, where 1 = strongly disagree and 7 = strongly agree.)

Item #1. I will probably look for a new job in the next year.

Item #2. I often think about quitting.

Please answer the following question.

Item #3. How likely is it that you could find a job with another employer with about the same pay and benefits you now have? (Likert Scale ranging from 1-7, where 1 = not likely at all and 7 = extremely likely)

Items from the *Conditions for Work Effectiveness Questionnaire (CWEQ I) and (CWEQ II Short Form) -- Opportunity subscale* (3 items):

Items #1-#3. How much of each kind of opportunity do you have in your present job? (Likert Scale ranging from 1-5, where 1 = None and 5 = A Lot)

- Challenging work.
- The chance to gain new skills and knowledge on the job.
- Tasks that use all of your own skills and knowledge.

Step #6: Decide how the questionnaire will be administered and set the response rate goal

The team determined that it would like a 70-percent response rate across the CCRC. The questionnaire will be administered in-person. The Director of Human Resources will work with each department head to schedule times for employee surveys. At least 2 interviewers will be available per shift. Survey interviews will be conducted on campus, in areas away from the departments in which interviewed employees work. Advance letters and reminder postcards will be mailed to selected staff at their residence, flyers will be posted throughout the campus and a “*Share your Voice!*” kick-off meeting will be held the week survey administration begins where refreshments will be served and door prizes given out.

¹ It is important to include all items in a subscale because our review and the findings on the properties of the instruments reported in this Guide are based on the entire subscales (not individual items within each subscale). If you choose to take only some items from a subscale, the properties we reported (e.g., reading level, reliability, validity) do not apply to the individual items.

Step #7: Design and pretest the questionnaire

Because this CCRC has many Spanish-speaking employees, cognitive testing will be done on the survey item translation. Pretesting will also be conducted with 10 English-speaking employees.

Step #8: Monitor data collection

Survey fielding will be conducted over a six-week period. The research unit on the CCRC campus and the department heads will meet weekly to discuss the progress of data collection. That way, the team is updated on the survey response rate and can, subsequently, strategize on what types of efforts are needed to increase the response rate (if any).

Step #9: Analyze data and present findings

Below is an illustrative example of the scores that correspond to answers three workers gave to the six questionnaire items. The CCRC will tabulate the results of **all** responding employees (of the random sample) using this same scoring process.

Worker ID	Intent to Turnover Items (response scale ranges from 1 to 7)			Conditions for Work Effectiveness Questionnaire II Items (response scale ranges from 1 to 5)		
	<i>Item #1</i>	<i>Item #2</i>	<i>Item #3</i>	<i>Item #1</i>	<i>Item #2</i>	<i>Item #3</i>
Worker #1	2	3	3	4	3	3
Worker #2	6	4	2	4	2	2
Worker #3	3	3	4	5	4	3

To calculate the score for each employee for the behavioral intent to leave job subscale, **sum** the scores given for all three items. In this example, below are the scores for each worker on this organizational commitment measure.

$$\text{Worker \#1: } 8 = (2 + 3 + 3)$$

$$\text{Worker \#2: } 12 = (6 + 4 + 2)$$

$$\text{Worker \#3: } 10 = (3 + 3 + 4)$$

Lower scores on this measure indicate greater organizational commitment, with possible scores on this 3-item measure ranging from 3 to 21. At the individual worker level, worker #1 shows the highest commitment (score of 8) followed by worker #3 (score of 10), with worker #2 (score of 12) showing the least commitment.

To calculate the score for each employee for the opportunity subscale of the “Conditions for Work Effectiveness Questionnaire II,” **average** the scores given for all three items. In this example, below are the scores for each worker on this empowerment measure.

Worker #1: $3.3 = [(4 + 3 + 3)/3] = 10/3$ items

Worker #2: $2.7 = [(4 + 2 + 2)/3] = 8/3$ items

Worker #3: $4.0 = [(5 + 4 + 3)/3] = 12/3$ items

Higher scores on this measure indicate greater empowerment in the form of more perceived opportunity, with possible scores on this 3-item measure ranging from 1 to 5. At the individual worker level, worker #3 shows the greatest level of empowerment (score of 4.0) followed by worker #1 (score of 3.3), with worker #2 (score of 2.7) showing the least empowerment.

The average is usually the statistic used to indicate the summary score on a measure across all respondents when using Likert-type response scales. Using the empowerment measure above as an example, here is how to calculate the average empowerment score for all respondents.

$$\frac{\text{Worker \#1 total score} + \text{Worker \#2 total score} + \text{Worker \#3 total score}}{3 \text{ (number of respondents)}}$$

Working through this formula we get these figures below, for an average of 3.3 among all three workers:

$$3.3 + 2.7 + 4.0 = 10/3 = 3.3$$

So, on average, this sample of workers at this CCRC tend to feel that they have “some” opportunities at work. However, based on the score of 3.3, there is room for improvement toward a score of 4 or 5.

Management believes the needs of each department may differ and has decided to put together employee focus groups for each department. The goal of these focus groups is to get a sense of the types of things needed to make employees feel more empowered in their jobs. All employees will be given the opportunity to be part of the focus groups. After examining each department’s focus group findings and comparing across departments, management will work with teams of staff members (across all departments and titles) to determine how to allocate resources across all staff in the best manner. The ultimate goal is to increase satisfaction with the working environment and to improve retention of staff. Results of each stage in the process will be shared at all-staff meetings.

MEASURING LONG-TERM CARE WORK: A Guide to Selected Instruments to Examine Direct Care Worker Experiences and Outcome

PDF Files Available for This Report

Cover, Table of Contents, Acknowledgments and Executive Summary

<http://aspe.hhs.gov/daltcp/reports/dcwguide.pdf>

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<http://aspe.hhs.gov/daltcp/reports/dcwguide1.pdf>

CHAPTER 2: How This Guide Can Help Organizations Use Information to Address the Challenges of Job Retention and Performance Among DCWs

<http://aspe.hhs.gov/daltcp/reports/dcwguide2.pdf>

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