

Differences in Certification and the Effect on Team Climate Among Community Health Workers in Texas

Mark Siemon, PhD, RN, PHNA-BC, CPH;
Brenna Kreglo, BS, RN; Blake Boursaw, MS

Abstract: The purpose of this study was to compare team climate among Texas community health workers (CHWs)/*promotoras* who were certified by the 2 different methods: (a) completing a state-approved training program, and (b) providing evidence of work experience (grandfathering). Analysis of survey results found no significant differences in Team Climate Inventory scores between CHWs who were certified either through state-approved training or through work experience. This research provides some preliminary evidence in support of experience-based certification, but there continues to be a need for more research evaluating CHW certification requirements and the impact of state certification of CHWs on population health outcomes.

Key words: *certification, community health workers, grandfathering, public policy, team climate*

EFFORTS to increase the adoption and integration of community health workers (CHWs) into health care organizations have been growing, and more states are developing legislation or guidelines to define the training or experience necessary to work as a certified CHW. The goals of state certification programs are to increase job op-

portunities, provide professional recognition, build sustainable funding, and improve pay for CHWs (Hirsch, 2014; Malcarney et al., 2017; Rush, 2015). More than a dozen states have developed programs that allow CHWs to be certified either through completion of an approved training program or based on prior work experience as a CHW (Association of State and Territorial Health Officials, 2017). CHW certification and certificate training programs developed by states range in length from 3 days, approximately 24 hours, to 160 hours. Among states with CHW certification and certificate programs, there are also large differences in the amount of work experience, from 1000 to 4000 hours, required for CHWs who wish to be certified on the basis of experience (Association of State and Territorial Health Officials, 2017; London et al., 2016; National Academy for State Health Policy, 2015).

While the evidence supporting the effectiveness of CHWs at improving patient and population outcomes continues to grow (Allen et al., 2016; Campbell et al., 2015;

Author Affiliations: *Idaho Public Health Association, Boise (Dr Siemon); Boise State University School of Nursing, Boise, Idaho (Ms Kreglo); and University of New Mexico College of Nursing, Albuquerque (Mr Boursaw).*

This study was funded by the Boise State University School of Nursing. The authors thank Carl H. Rush, MRP, Project on CHW Policy & Practice, University of Texas Institute for Health Policy, for his help in reviewing and commenting on this research article. The authors also thank the Texas Department of Health and Human Services, Community Health Worker Training and Certification Program, for its help in contacting CHWs/promotoras in Texas.

The authors have no conflicts of interest.

Correspondence: Mark Siemon, PhD, RN, PHNA-BC, CPH, Idaho Public Health Association, PO Box 5165, Ketchum, ID 83340 (msiemonunm@gmail.com).

DOI: 10.1097/JAC.0000000000000228

Kangovi et al., 2017; Kim et al., 2016; Perry et al., 2014; Trump & Mendenhall, 2017), few studies have examined the impact of CHW certification programs developed by states on health outcomes. Previous research on the impact of CHW certification found no difference in the perception of team climate among registered nurses (RNs) who worked with state-certified and noncertified CHWs. However, the RNs who worked in states with CHW certification programs were significantly more likely to report that certification of CHWs improved the ability of their health care team to deliver quality care (Siemon et al., 2015). Additional research among licensed health and social service providers in New Mexico found mixed support for certification of CHWs (Robert Wood Johnson Foundation, 2012; Siemon & Mendelson, 2011).

Since the CHWs' skill set focuses more heavily on relationship development and peer-to-peer communication than on clinical knowledge, historically, many employers have relied on community experience and credibility in hiring CHWs (C. Rush, MRP, electronic communication, May 3, 2017). A review of changing work roles for CHWs found that a shift in hiring has occurred from community-based organizations to hospitals and health care systems. The authors report this shift in employers has also led to a greater emphasis on "education and training of CHWs more highly than traditional characteristics, such as peer status" (Malcarney et al., 2017, p. 360).

Miller et al. (2014) recommended that states include some form of experience-based certification in their regulations, which would provide flexibility to allow individuals who have been working as CHWs to become certified. The benefits to allowing certification of individuals who have been working in their communities include providing continuity of care for patients and populations, and retaining a cohort of experienced CHWs to work with community partners and licensed health care providers. Experienced CHWs can also act as trainers, mentors, and supervisors for new CHWs entering the profession. A pathway based on experience for individuals who

have less formal education or who may find conventional educational environments challenging also helps avoid creation of unnecessary or unintended barriers to certification.

As the number of states that adopt certification programs for CHWs expands, so does the need for additional research on the outcomes of CHW certification programs. There are no national certification standards for CHWs, and current programs developed by states, both education- and experience-based, vary widely (Miller et al., 2014; O'Brien et al., 2009). One of the questions that state policy makers need to answer in developing certification programs is whether CHWs will be certified through completion of a state-approved training program, through work experience as a CHW, or both.

The purpose of this research was to determine whether the type of certification, education-based (ie, state-approved training or education) or experience-based (ie, prior work experience as a CHW), has an effect on team climate among certified CHWs in Texas. Team climate has been defined as the "shared perceptions about the strategic imperatives that guide the orientation and actions of team or group members" (National Research Council, 2015, p. 66). This study uses team climate as an intermediary measure of team performance that can influence health outcomes for populations cared for by interdisciplinary health care teams (Bower et al., 2003; Butt et al., 2008; Howard et al., 2011).

The Team Climate Inventory (TCI) was chosen for this study because we believe the integration of CHWs into existing health care teams and organizations fits a Diffusion of Innovation model that recognizes the complexities of adopting new innovations (ie, CHWs) into existing organizations (Greenhalgh et al., 2004; Mathisen & Einarsen, 2004; Rogers, 2003). The TCI, developed by Anderson and West (1996), has been used globally to assess teams in a variety of work settings (Bookey-Bassett et al., 2016; Valentine et al., 2015; Waite & Nichols, 2002).

The 38-item TCI survey has been shown to have an interrater reliability of 0.67 to 0.98 and content validity of 0.84 to 0.94

and to meet the review criteria for psychometric validity along with having “an established relationship with nonself-reported outcomes” (Valentine et al., 2015, p. e20). Loo and Loewen (2002) completed a confirmatory factor analysis of the 14-item TCI short form developed by Kivimäki and Elovainio (1999), and their results “showed high internal consistency reliabilities” (p. 261) and acceptable α coefficients for the 4 factors (ie, Vision, Participative Safety, Task Orientation, and Support for New Ideas). Additional studies have confirmed the reliability and validity of the 14-item TCI to assess teams (Boada-Grau et al., 2011; Strating & Nieboer, 2009).

This study used a 19-item TCI survey (M. West, PhD, electronic communication, September 14, 2016) with questions from the original TCI and includes the following subcategories/factors: (a) *Participation*, to assess perceptions on how much participation there is on the team; (b) *Support for New Ideas/Innovation*, to measure individuals’ perceptions about attitudes toward change within the team; (c) *Team Objectives*, to assess individual understanding of the team’s objectives; and (d) *Task Style/Orientation*, to assess how the team monitors performance. The 19-item TCI survey has been validated among Canadian health care professionals and staff working in primary care, and the French version was found to have “good internal consistency for each scale; Cronbach alpha for all 19 items 0.95” (Beaulieu et al., 2014, p. 48).

Whether team climate has a direct effect on patient care outcomes is still unclear (Goh & Eccles, 2009), but studies have shown an association between team climate, positive diabetes care outcomes, and quality of primary care services (Bower et al., 2003; Campbell et al., 2001). Hartgerink et al. (2014) found that team climate was associated with development of relational coordination, a measure of effectiveness of coordination among interdisciplinary health care team members, through the “promotion of coordination and communication among professionals” (p. 796) who provided care to elderly clients with complex health needs in the hospital.

METHODS

This study was approved by the institutional review board. A convenience sample of CHWs was recruited using an e-mail with a link to the online survey. The recruitment e-mail was sent to state agencies and organizations that work with CHWs, requesting that the survey e-mail be forwarded to state-certified CHWs. Participants who completed the survey received a \$10 e-gift card for Amazon.com for their time. Preliminary analysis and data formatting were done using Microsoft Excel 2016 and IBM SPSS Statistics 22.0 software, respectively, and statistical analysis was completed using STATA 12.1. A comparison of continuous demographic variables (eg, age, work months, and team tenure) between the 2 groups—CHWs who obtained state certification by completing a state-approved CHW training program or CHWs who received experience-based certification (ie, grandfathering)—was completed using independent-samples *t* tests and non-parametric χ^2 tests to compare categorical demographic variables. Independent-samples *t* tests were used to determine whether there were any significant differences between the 2 group’s TCI mean subcategory/factor scores and overall mean TCI score. Cohen’s *d* was used as an effect size measure for differences in mean TCI subcategory/factor and overall TCI scores between groups with the standard thresholds for “small,” “medium,” and “large” effect sizes of 0.2, 0.5, and 0.8, respectively (Cohen, 1988). Post hoc linear regressions were run after independent-samples *t* tests to assess the impact of controlling for any observed statistically significant demographic differences between groups and mean differences in overall TCI and subcategory/factor scores.

RESULTS

One hundred four participants logged onto the survey site and completed the survey between July 22 and August 1, 2015. Survey analysis was limited to CHWs/*promotoras* from Texas because the majority of the

survey participants were from Texas, and CHWs/*promotoras* in Texas are all subject to the same certification standards, which is not the case with a multistate sample. Ninety-five of the survey participants reported that they were currently certified as CHWs in Texas, and they had worked as CHWs as part of their primary work role during the past year. The responses to the survey questions were divided into 2 groups based on whether they were certified through completion of CHW training course at a postsecondary institution such as a community college, technical school, or other state-certified training program ($n = 50$) or whether their state certification was based on work experience or grandfathering ($n = 45$). Review of the survey responses found less than 1% of responses to TCI subcategory/factor and demographic questions with missing values. Because of the low number of missing values, the overall TCI and subcategory/factor scores were calculated on the basis of the mean of the nonmissing items and analyses involving demographic variables simply dropped missing responses from analysis.

Demographic characteristics for the 2 sample groups are shown in Table 1. The majority of the CHWs who responded to the survey were white females, who reported Hispanic, Latino, or Mexican American ethnicity, who had graduated high school, and who completed some college or had an associate degree. A majority worked at not-for-profit or government health care organizations with fewer than 100 employees. The only significant difference in demographic information between the 2 groups was in team tenure, the mean amount of time participants reported having "... worked with your current health care team." The mean team tenure for participants who completed a state-approved CHW certification program was 34.5 months and was 56.75 months for participants who were certified on basis of the work experience.

Independent-samples t tests of TCI scores for the 4 subcategory/factor variables—Participation, Support for New Ideas/Innovation, Team Objectives, and Task Style/Orientation, along with the overall TCI score—found no significant difference

between the 2 group means (Table 2), with all observed differences below the "small" effect size threshold of Cohen's $d = 0.2$. Linear regressions including team tenure, the only statistically significant observed demographic difference between groups, showed that controlling for team tenure had minimal impact on the results of independent-samples t tests, with certification type as predictors of TCI subcategory/factor and overall TCI scores. Team tenure and certification type were not statistically significant predictors in any of these regression, and "adjusted" differences in means controlling for team tenure differed by at most 0.11 from observed differences in means.

DISCUSSION

CHWs working as members of interdisciplinary health care teams can increase trust in the health care system among vulnerable and underserved populations. State policies and regulations on the certification of CHWs may have an impact on the diffusion of CHWs into existing health care teams—by promoting or inhibiting the integration of CHWs. State policies on CHW certification vary widely, and there is little evidence to guide policy makers or state agencies on how much work experience should be required for certification of CHWs who have been providing care in their communities.

Our research found no difference in the perceptions of team climate between CHWs/*promotoras* who were certified through a state-approved training program or work experience in Texas. Experience-based certification standards for CHWs in Texas are lower, 1000 hours of work experience as a CHW, than in other states that allow for experience-based certification. Texas also allows CHWs to receive experience-based certification without a deadline or time limit for applying for certification through grandfathering. Many of the experience-based state certification programs are time limited, and applicants must apply within a year of the implementation of the state certification program.

Table 1. Survey Sample Demographic Information

Community Health Worker has . . .	State-Approved Certification Course (n = 50; 52.6%) Mean (SD)	Experience-Based Certification (n = 45; 47.4%) Mean (SD)
Age	44.27 (11.57)	43.32 (9.25)
Certification months	43.3 (52.34)	39.69 (42.04)
Work time in current position, months	42.79 (50.96)	55.49 (68.31)
Team tenure, months^a	34.5 (36.01)	56.75 (63.83)
	n (%)	n (%)
Gender		
Male	6 (12)	7 (15.6)
Female	44 (88)	38 (84.4)
Race		
American Indian or Alaska Native	1 (2)	1 (2.2)
Asian	2 (4.1)	0
Black or African American	11 (22.4)	10 (22.2)
White	26 (53.1)	27 (60)
Some other race	1 (2)	0
Multiracial	0	1 (2.2)
Other	8 (16.3)	6 (13.3)
Ethnicity		
Not Hispanic, Latino, or of Spanish origin	16 (33.3)	18 (40.9)
Hispanic, Latino, or of Spanish origin	21 (43.7)	17 (38.6)
Mexican, Mexican American, or Chicano	7 (14.6)	8 (18.2)
Puerto Rican	2 (4.2)	0
Other	2 (4.2)	1 (2.3)
Education		
Some high school	1 (2)	0
High school	3 (6)	3 (6.7)
Some college	23 (46)	16 (35.6)
Associate degree	5 (10)	4 (8.9)
Diploma in nursing	1 (2)	0
Bachelor's degree	13 (26)	10 (22.2)
Master's degree	3 (6)	9 (20)
Doctorate or professional	1 (2)	1 (2.2)
Other	0	2 (4.4)
Work setting		
For-profit health care organization	7 (14)	7 (15.6)
Not-for-profit health care organization	21 (42)	19 (42.2)
Tribal health care organization	0	1 (2.2)
State, county, or city organization	12 (24)	12 (26.7)
Other	10 (20)	6 (13.3)

^a*P* = .04.

Both extensive work experience and deadlines for certification may limit the number of CHWs who are eligible for state certifica-

tion. In addition, the trend in CHW employment toward hospitals and health care systems, and a shift toward more standardized

Table 2. Results From Team Climate Inventory 2-Samples *t* Tests With Equal Variances

Team Climate Inventory Subcategory/Factor	Completed State-Approved CHW Certification Course (n = 50), Mean (SD)	Experience- Based Certification (n = 45), Mean (SD)	<i>t</i> (93)	<i>P</i>	Cohen's <i>d</i>
Participation (Likert scale 1-5)	3.98 (0.91)	3.94 (0.90)	0.22	.83	0.04
Support for New Ideas/Innovation (Likert scale 1-5)	3.94 (0.91)	3.96 (0.91)	− 0.12	.90	− 0.03
Team Objectives (Likert scale 1-7)	5.95 (0.96)	5.83 (1.10)	0.6	.55	0.12
Task Style/Orientation (Likert scale 1-7)	5.5 (1.07)	5.53 (1.22)	− 0.12	.91	− 0.02
Overall Team Climate Inventory score	19.38 (3.07)	19.26 (3.57)	0.17	.86	0.35

education and training for CHWs, may impact the access to new job opportunities for experienced CHWs (Malcarney et al., 2017). This may lead to experienced CHWs leaving or being replaced by less experienced CHWs who have been certified through education-based certification programs.

Limitations of this study include a non-random convenience sample and the self-reported eligibility for participating in the online survey. Certified CHWs/*promotoras* working in Texas were more likely to respond to the online survey. This may be due to the length of time the Texas Department of Health and Human Services has had a CHW certification program and the better communication and networking that have resulted from these efforts. The different work roles reported by study participants (eg, CHW, community liaison, clinical liaison, care coordinator, patient navigator) may also have impacted how participants responded to questions about team climate based on their role within the health care team. The English-only online survey would have limited the survey to only those CHWs who had access to the Internet and who could read English. Studies using the TCI with interdisciplinary health care teams have found a positive association between team climate scores and leadership

(National Research Council, 2015) and organizational culture, and a negative association with a hierarchical team culture (Howard et al., 2011); these variables were not assessed as part of this study.

CONCLUSION

This study examined perceptions of team climate among state-certified CHWs/*promotoras* working in Texas. Texas was an early leader developing state certification standards and regulations for CHW certification, and the regulations included an experience-based certification pathway. Texas' requirements for experience-based certification are less stringent than those of other states. Adoption of similar standards by other states developing CHW certification regulations may help increase the number of experienced CHWs who apply for state certification. Allowing CHWs who are currently working within communities to continue their work as certified CHWs would support vulnerable populations. This study provides some preliminary evidence in support of more lenient certification requirements and expanding opportunities for experience-based certification of CHWs. There continues to be a need for more research evaluating the impact of state

certification of CHWs on population health outcomes and the most effective standards

for allowing experience-based certification of CHWs.

REFERENCES

- Allen, C. G., Brownstein, J. N., Satsangi, A., & Escoffery, C. (2016). Community health workers as allies in hypertension self-management and medication adherence in the United States, 2014. *Preventing Chronic Disease*, 13(E179), 1–10. doi:https://doi.org/10.5888/pcd13.160236
- Anderson, N., & West, M. A. (1996). The team climate inventory: Development of the TCI and its applications in teambuilding for innovativeness. *European Journal of Work and Organizational Psychology*, 5(1), 53–66.
- Association of State and Territorial Health Officials. (2017). *Community health workers (CHWs) training/certification standards*. Retrieved from <http://www.astho.org/Public-Policy/Public-Health-Law/Scope-of-Practice/CHW-Certification-Standards-Map/>
- Beaulieu, M., Dragieva, N., Del Grande, C., Dawson, J., Haggerty, J. L., & Barnsley, J. (2014). The team climate inventory as a measure of primary care teams' processes: Validation of the French version. *Healthcare Policy*, 9(3), 40–54.
- Boada-Grau, J., Diego-Vallejo, R., Llanos-Serra, E., & Vigil-Colet, A. (2011). Versión breve en español del Team Climate Inventory (TCI-14): desarrollo y propiedades psicométricas [Short Spanish version of Team Climate Inventory (TCI-14): Development and psychometric properties]. *Psicothema*, 23(2), 308–313.
- Bookey-Bassett, S., Markle-Reid, M., McKey, C., & Akhtar-Danesh, N. (2016). A review of instruments to measure interprofessional collaboration for chronic disease management for community-living older adults. *Journal of Interprofessional Care*, 30(2), 201–210.
- Bower, P., Campbell, S., Bojke, C., & Sibbald, B. (2003). Team structure, team climate and the quality of care in primary care: An observational study. *BMJ Quality & Safety*, 12, 273–279. doi:10.1136/qhc.12.4.273
- Butt, G., Markle-Reid, M., & Browne, G. (2008). Interprofessional partnerships in chronic care: A conceptual model for measuring partnership effectiveness. *International Journal of Integrated Care*, 8(14), 1–14.
- Campbell, J. D., Brooks, M., Hosokawa, P., Robinson, J., Song, L., & Krieger, J. (2015). Community health worker home visits for Medicaid-enrolled children with asthma: Effects on asthma outcomes and cost. *American Journal of Public Health*, 105(11), 2366–2373. doi:10.2105/AJPH.2015.302685
- Campbell, S. M., Hann, M., Hacker, J., Burns, C., Oliver, D., Thapar, A., . . . Roland, M. O. (2001). Identifying predictors of high quality care in English general practice: Observational study. *BMJ*, 323(7316), 784–787.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Goh, T. T., & Eccles, M. P. (2009). Team climate and quality of care in primary health care: A review of studies using the Team Climate Inventory in the United Kingdom. *BMC Research Notes*, 2(222), 1–5. doi:10.1186/1756-0500-2-222
- Greenhalgh, T., Robert, G., MacFarlane, F., Bate, P., & Kyriakidou, O. (2004). Diffusion of innovation in service organizations: Systematic review and recommendations. *The Milbank Quarterly*, 82(4), 581–629.
- Hartgerink, J. M., Cramm, J. M., Bakker, T. J., van Eijnden, A. M., Mackenbach, J. P., & Neiboer, A. P. (2014). The importance of multidisciplinary teamwork and team climate for relational coordination among teams delivering care to older patients. *Journal of Advanced Nursing*, 70(4), 791–799. doi:10.1111/jan.12233
- Hirsch, G. (2014, June 4). *State legislation supports professional development of community health workers, leading to greater professional recognition, enhancements in training, and funding*. Rockville, MD: Agency for Healthcare Research and Quality. Retrieved from <https://innovations.ahrq.gov/profiles/state-legislation-supports-professional-development-community-health-workers-leading>
- Howard, M., Brazil, K., Akhtar-Danesh, N., & Agarwal, G. (2011). Self-reported teamwork in family health team practices in Ontario: Organizational and cultural predictors of team climate. *Canadian Family Physician*, 57, e185–e191.
- Kangovi, S., Mitra, N., Grande, D., Huo, H., Smith, R. A., & Long, J. A. (2017). Community health worker support for disadvantaged patients with multiple chronic diseases: A randomized clinical trial. *American Journal of Public Health*, 107(10), 1660–1667. doi:10.2105/AJPH.2017.303985
- Kim, K., Choi, J. S., Choi, E., Nieman, C. L., Joo, J. H., Lin, F. R., . . . Han, H. R. (2016). Effects of community-based health worker interventions to improve chronic disease management and care among vulnerable populations: A systematic review. *American Journal of Public Health*, 106(4), e3–e28. doi:10.2105/AJPH.2015.302987
- Kivimäki, M., & Elovainio, M. (1999). A short version of the Team Climate Inventory: Development and psychometric properties. *Journal of Occupational and Organizational Psychology*, 72(2), 241–246.
- London, K., Carey, M., & Russell, K. (2016). *Community health worker certification requirements by state*. Hartford, CT: Connecticut Health Foundation.

- Retrieved from <http://www.cthealth.org/wp-content/uploads/2016/02/CHW-Certification-by-State-Final-Final.pdf>
- Loo, R., & Loewen, P. (2002). A confirmatory factor-analytic and psychometric examination of the Team Climate Inventory: Full and short versions. *Small Group Research*, 33(2), 254–265. doi:10.1177/104649640203300205
- Malcarney, M., Pittman, P., Quigley, L., Horton, K., & Seiler, N. (2017). The changing roles of community health workers. *Health Services Research*, 52(1), 360–381. doi:10.1111/1475-6773.12657
- Mathisen, G. E., & Einarsen, S. (2004). A review of instruments assessing creative and innovative environments within organizations. *Creativity Research Journal*, 16(1), 119–140.
- Miller, P., Bates, T., & Katzen, A. (2014). *Community health worker credentialing state approaches*. Cambridge, MA: Center for Health Law & Policy Innovation, Harvard Law School. Retrieved from <http://www.chlpi.org/wp-content/uploads/2014/06/CHW-Credentialing-Paper.pdf>
- National Academy for State Health Policy. (2015). *State community health worker models—Certification*. Retrieved from <http://www.nashp.org/state-community-health-worker-models/>
- National Research Council, Committee on the Science of Team Science; N. J., Cooke, & M. L., Hilton (Eds.). (2015). *Enhancing the effectiveness of team science*. Washington, DC: National Academies Press.
- O'Brien, M. J., Squires, A. P., Bixby, R. A., & Larson, S. C. (2009). Role development of community health workers: An examination of selection and training processes in the intervention literature. *American Journal of Preventive Medicine*, 37(6, Suppl. 1), S262–S269. doi:10.1016/j.amepre.2009.08.01
- Perry, H. B., Zulliger, R., & Rogers, M. M. (2014). Community health workers in low-, middle-, and high-income countries: An overview of their history, recent evolution, and current effectiveness. *Annual Review of Public Health*, 35, 399–421. doi:10.1146/annurev-publhealth-032013-182354
- Robert Wood Johnson Foundation. (2012, November 16). *Do community health workers need formal training and certification?* Retrieved from <http://www.rwjf.org/en/library/articles-and-news/2012/11/do-community-health-workers-need-formal-training-and-certification.html>
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York, NY: Free Press.
- Rush, C. (2015). *Basics of community health worker credentialing*. San Antonio, TX: Community Resources LLC. Retrieved from <http://www.michwa.org/wp-content/uploads/Basics-of-Community-Health-Worker-Credentialing-rev-07-23-12.pdf>
- Siemon, M., & Mendelson, C. (2011). *Perceptions of certification and standardization of training of community health workers among health care professionals and social workers in New Mexico*. College of Nursing, University of New Mexico, Albuquerque, NM. Unpublished manuscript.
- Siemon, M., Shuster, G., & Boursaw, B. (2015). The impact of state certification of community health workers on team climate among registered nurses in the United States. *Journal of Community Health*, 40, 215–221. doi:10.1007/s10900-014-9919-6
- Strating, M., & Nieboer, A. P. (2009). Psychometric test of the Team Climate Inventory-short version investigated in Dutch quality improvement teams. *BMC Health Services Research*, 9(126), 1–7. doi:10.1186/1472-6963-9-126
- Trump, L. J., & Mendenhall, T. J. (2017). Community health workers in diabetes care: A systematic review of randomized controlled trials. *Families, Systems, & Health*, 35(3), 320–340.
- Valentine, M. A., Nembhard, I. M., & Edmondson, A. C. (2015). Measuring teamwork in health care settings: A review of survey instruments. *Medical Care*, 53(4), e16–e30.
- Waite, M. S., & Nichols, L. O. (2002). Broad-spectrum instruments. In G. D., Heinemann, & A. M., Zeiss (Eds.), *Team performance in health care: Assessment and development* (pp. 209–298). New York, NY: Kluwer Academic/Plenum Publishers.