TOWARDS AN EVIDENCED-BASED TRAINING MODEL FOR COMMUNITY HEALTH WORKERS IN DIABETES PREVENTION

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BACKGROUND

South Africa (SA) is currently home to the largest population of people living with diabetes mellitus in Africa. In 2015, the estimated number of South Africans with type 2 diabetes mellitus was 2.29 million (IDF Diabetes Atlas, 2015). In SA, diabetes affects the population across ethnic and income diversity, with the previously disadvantaged who are often considered as a low-risk group for developing the condition among those most affected (Peer et al., 2012; Erasmus et al., 2012).

For each South African with diabetes, it has been estimated that there are two others at high-risk for future development of the condition. Therefore, in addition to diagnosing and appropriately treating those with the condition, efforts are needed to prevent the full development of diabetes among those South Africans at high future risk. Efficacy trials of diabetes prevention programmes (DPP) have provided evidence of the effectiveness of lifestyle interventions in preventing or postponing the onset of diabetes (Colaguri et al., 2009; Gillies et al., 2009). Completed or ongoing implementation studies of DPP worldwide are providing additional evidence to support the feasibility of efficacy DPP trials using less intensive approaches and unskilled workers such as community health workers (CHW) as intervention implementers (Norris et al., 2006; Ali et al. 2012).

RATIONALE

CHW have already been used to deliver components of diabetes management, in health-care and community-based settings, with suggestions of favourable effects on the outcomes of care (Shah, Kaselitz & Heisler, 2013). Furthermore, community-based participatory research models were mentioned as possible facilitators for implementing and sustaining CHW interventions in real-world settings. However, not many published studies have implemented such approaches in its entirety. In addition, little is said about the most appropriate training, support for and characteristics of CHW (Shah, Kaselitz & Heisler, 2013). Increasingly, diabetes prevention implementation is also empowering CHW as facilitators of interventions.

Box 1: The different labels of a community health worker (globally)

✓ Creating connections between vulnerable populations and health-care systems

✓ Facilitating health-care and social service system navigation

✓ Managing care and care transitions for vulnerable populations

✓ Determining eligibility and enrolling individuals into health insurance plans

✓ Ensuring cultural competence among health-care professionals serving vulnerable populations

✓ Educating health system providers and stakeholders about community health needs

✓ Providing culturally appropriate health education on topics related to chronic disease prevention, physical activity and nutrition

✓ Advocating for underserved individuals to receive appropriate services

✓ Collecting data and relaying information to policymakers to inform policy change and development

✓ Providing informal counseling, health screenings, and referrals

✓ Building capacity to address health issues

<https://www.ruralhealthinfo.org/community-health/community-health-workers/1/roles>

Box 2: The various roles community health workers fulfil

RESEARCH PURPOSE

To develop and pilot a feasible, sustainable model to train CHW on basic diabetes risk assessment, diabetes prevention/ healthy lifestyle and diabetes management in SA.

RESEARCH OBJECTIVES:

THE PROPOSED STUDY AIMS:

- to determine the characteristics that CHW in DPP should hold to have successful intervention outcomes;
- to establish best practice/existing CHW training models utilised in DPP interventions internationally;
- to adapt and translate the CHW training models to be culturally and contextually appropriate for use in SA;
- to implement the adapted training model and pilot a small/short-term DPP intervention to establish effectiveness.

METHODOLOGY

THE STUDY COMPRISES THREE PHASES, USING MIXED-METHOD APPROACHES.

PHASE 1: DESKTOP SURVEY/SYSTEMATIC REVIEW (COMPLETED)

We developed a systematic review protocol using guidelines described by the Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P). The electronic database searches were done on MEDLINE via PubMed Central, EBSCOHost, and SCOPUS/EMBASE (Fig. 1). The searches were limited to publications using English as language. Two authors independently identified potentially relevant studies by reviewing titles and abstracts retrieved from the databases above. We retrieved and screened the full texts of studies identified as potentially relevant in duplicate for inclusion.

Figure 1: Flow diagram of retrieved studies

PHASE 2: THE DEVELOPMENT OF A DIABETES PREVENTION-FOCUSED CHW TRAINING MODEL FOR SA (IN PROGRESS)

Step 1: Identify best practice CHW training models from the systematic review (Phase 1)

Step 2: Using a community-based participatory approach, stakeholders including community members and leaders, diabetes experts, primary health-care providers, dietitians, sports scientists, non-profit organisations (NPO) employing CHW, etc. will be invited to review and provide input on existing best practice models. These stakeholders will also assist researchers in adapting these models to be appropriate for the communities we wish to serve.

- These will take the form of a series of workshops.
- Expert panels will be invited to review the findings (modified CHW training models as well as the suggested curriculum to be included in the models).
- A sample of community members as well as that of CHW will be invited to review the models' curriculum for cultural appropriateness as well as the level of understanding.
- Finalisation of models to be piloted.
- Set criteria for CHW to be recruited.
- Identify the best possible team to conduct the training.

Two best practice CHW training models will be identified to take forward into the piloting phase. The two identified models will be adapted for the various communities in the South African DPP (SA-DPP) that targets black and Coloured urban communities in the Western Cape (as a point of entry).

PHASE 3: PILOTING THE TWO CHW TRAINING MODELS WHICH HAVE BEEN CULTURALLY TAILORED ACCORDING TO THE DPP LIFESTYLE INTERVENTION (NEXT PHASE)

Step 1:

- Identify possible CHW from the selected communities
- Identify existing CHW from NPO operating in the selected communities
- Invite said CHW for training

Step 2:

- Conduct training [both models] [pre- and post-training assessments]
- Post-training semi-structured interviews with newly trained CHW regarding training

Step 3:

- Refine and finalise best faring DPP CHW training model for roll-out
- Enrol newly trained CHW into SA-DPP

RESULTS AND DISCUSSION:

PHASE1:

Database searches identified 18 906 entries; after removal of screened duplicate titles and abstracts, 182 publications were selected for further full-text evaluation. Thirty-eight manuscripts met the inclusion criteria and form the basis of this review. These 38 manuscripts reported on 30 studies with companion manuscripts comprising protocol manuscripts, pilot studies, cost analyses and process evaluation manuscripts.

The profile, scope of roles played, and training received by CHW varied substantially across programmes. The duration of the training varied considerably among studies, from a single one-hour session to 40 hours and even 100 hours or more. The duration of training varied significantly, with shorter training sessions scheduled in programmes with fewer CHW responsibilities. Overall, the training would be culturally sensitive and/or appropriate. Topics covered include the importance of good nutrition, benefits of increased physical activity, communication and leadership skills required to run a group session and impart knowledge, and some theoretical background on the intervention as well as motivational interviewing as a method to facilitate behaviour change.

The complexity of DPP and the diverse CHW roles preclude attributing specific outcomes to CHW involvement. Nevertheless, documenting potential CHW roles and the relevant training required may optimise CHW' contributions and facilitate their involvement in DPP in the future.

CONCLUSIONS

Guidelines that describe the potential roles of CHW, the appropriate training required for each task/role and the type of programmes that would benefit from CHW involvement may be useful. While such guidelines may need to be adapted for different populations, they may encourage greater utilisation of CHW in appropriate health-care programmes including DPP, and lead to better outcomes. More research, especially evaluation of CHW programmes, are required and to identify optimal roles, training and support for CHW working in DPP. We deduce that by developing an evidenced-based training model for CHW in DPP, will contribute positively to programme outcomes.

REFERENCES:

- Ali, M.K., Echouffo-Tcheugui, J. & Williamson, D.F. (2012). How effective were lifestyle interventions in real-world settings that were modeled on the Diabetes Prevention Program? Health Affairs, 31(1), 67-75.
- Colaguri, R., et al. (2009). National Evidence Based Guideline for the Primary Prevention of Type 2 Diabetes. Diabetes Australia and the NHMRC, Canberra.
- Erasmus, R.T., et al. (2012). High prevalence of diabetes mellitus and metabolic syndrome in a South African Coloured population: baseline data of a study in Bellville, Cape Town. S Afr Med J, 102(11 Pt 1), 841-4.
- Gillies, C.L., et al. (2007). Pharmacological and lifestyle interventions to prevent or delay type 2 diabetes in people with impaired glucose tolerance: systematic review and meta-analysis. BMJ, 334(7588), 299.
- International Diabetes Federation. (2015). IDF Diabetes Atlas, 7th edn. Brussels, Belgium: International Diabetes Federation. <http://www.diabetesatlas.org>