

*Full Length Research Paper*

## **Paradigm shift to strengthen public health programming: A case for a unified public health leadership approach**

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Received 24 September, 2013; Accepted 16 May, 2014

The continued challenges in public health programs and in particular the dearth of tested approaches that hinges on systems thinking approach, holistic planning and implementation with all relevant stakeholder calls for newer approaches in public health leadership. This work advances a unified leadership theory drawn from skills approach, high coaching and high directive behavior and system thinking approach. The unified leadership approach underscored key leadership themes: system thinking, vision, power sharing, process based and collateral leaderships. It is expected that such a multi-prong approach will strengthen holistic planning with input from all concerned partners, facilitate clarity of roles and balancing of power so that it will improve coordination, collaboration, commitment, program sustainability and oversight function that will result in effective public health interventions.

**Key words:** Leadership theories, leadership styles, program outcomes

### **INTRODUCTION**

Public health challenges are complex with rapidly evolving topical issues at local, national and international levels driven by globalization, policy changes, economic crises, natural and man-made disasters such as wars, terrorism including use of biological agents of diseases, deforestation, global warming and large scale destruction of flora and fauna through constructions (Nahavandi, 2012). The collaboration of all stakeholders at various levels will go a long way in addressing the root causes of disease and health related events and the provision of effective promotive, preventive, curative and rehabilitative health services which goes beyond the realms and capacity of any single organization (Koh and Jacobson,

2009).

This collaboration requires effective partnership and depending on the problem to be addressed; partners could be multilateral organizations such as United Nations agencies (WHO, UNICEF, UNFPA, UNDP, World Bank, etc.), to international donors, national and local community based support groups and organizations that could be public, private for profit and private not for profit. However, it is important to note that irrespective of the composition and competencies of partners, they collaborate with the understanding and belief that they have something to gain in the partnership which will support attaining their respective organizational objectives.

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This work is aimed at reviewing the current trend in collaborative leadership researches and applications in public health practices to underscore areas of weaknesses and how best to address the identified gaps in existing literature. The specific objectives are:

- 1) For players in public health programs to gain better understanding of how leadership styles affect the operations and outcomes of organization and programs.
- 2) Review and document how leaders maneuver and overcome the negative effect of their leadership styles on ownership, commitment and team spirit among various stakeholders in an organization and public health program in order to provide ways how to address program delivery issues.
- 3) Contribute to the design of potential policies and strategies to facilitate collaboration, commitment and proactive involvement and participation of community structures, private organizations and authorities vested with the responsibility of leading the public health programs at all levels.

## METHODOLOGY

Literature search was conducted from several databases (MEDLINE, CINAHL Plus, ISI web of Science, Nursing and Allied Health source, Social Science Direct, SAGE), and the web sites of multi-lateral organizations of the United Nations Systems (WHO, UNICEF, UNFPA) using Google scholar, PUBMED and EBSCO search engines. MeSH words and phrases used included leadership styles, leadership behaviour, trait theory, skills approach, contingency theory, theories of behaviour, public health leadership, decision making in organizations, program ownership, and community engagement. Articles were screened to ensure it reflected or encompasses the key words of this article and 32 articles/reports have met the inclusion criteria based on concordance among the authors. Priority was given to articles and reports published from 2006 to 2013 and they constituted about two thirds of articles cited.

### The contextual basis of various leadership theories

One of the unavoidable questions in public health services is how to ensure efficient and effective delivery of services which is usually influenced by the leadership behavior and style along the service delivery continuum. Leadership style was reported to be a determinant for the level of trust, staff and followers accord their leaders, their level of motivation, team dynamics, commitment and zeal to identify with the leaders vision and the mission required to achieve health program goals (Burke et al., 2006). The performance of leaders is often influenced by the policy environment, economic factors, organizational ethics and individual attitudes and competencies which are also individually linked to leadership style and thus making leadership approach the over bearing factor that defines the success of organizations and public health programs (Avolio et al., 2009).

The significance of leadership of Public health programs cannot be over stressed since it is an embodiment of the principles of primary health care and human rights in general such as equity, a just and egalitarian society in order for all to achieve a state of health that promotes attainment of individual and collective

potentials (Koh and Jacobson, 2009; Koh, 2009). Thus leaders that are able to aggregate individual/community and program goals and provide regular and accurate performance feedback have invariably recorded improved team performance by over a third of what was previously known (Roebuck, 2011). This therefore calls for a deliberate systematic engagement of followers/community gate keepers by public leaders at all levels through multi-pronged styles that will foster support, and team spirit among all stakeholders in order to achieve the common program goals. The need for effective leadership among social, political and management scientists has remained a topical issue for several decades with primary focus being on what factors, attributes and behaviors that define leadership performance. The outcome of this drive has given birth to several leadership theories and approaches such as the trait theory, the skills approach, the contingency theory, the leadership behavioral and contemporary theories (Nahavandi, 2012).

It should be noted that, these theories and approaches are not sacrosanct; therefore more than one theory is usually displayed by leaders for effective management. This means leaders approach issues differently depending on the challenges they faced and other factors that influence the selection of their leadership style. Moreover, the attitude and behavior of leaders is determined by their value system and to some extent influenced by the values of their followers/staff (Bruno and Eduardo, 2006) and leadership performance is most effective if there is commonality in the value system of the leaders and follower (Khrishnan, 2005). The influence of self-awareness on the actions of leaders enables the leader to control his/her emotions in order to think and take actions based on facts rather than one driven by emotions, although sometimes the appropriate use of emotions could further make his followers to trust, believe in his mission and go all the way to achieve the leaders' vision (Ioannidou and Konstantikati, 2008). Above all, leadership approaches that are in tandem with systems thinking (Mumford et al., 2000), and engages all formal and informal stakeholders including staff and communities have been reported to create joint ownership and increase accountability (Alexander et al., 2001, 2003).

### Problem statement and gaps in existing literature

The underlying root causes of topical public health challenges such as HIV/AIDs, Maternal and child mortality, drug abuse, violence and man-made disasters such as terrorism and global warming are closely related to individual/community attitude, behaviors and value system (Gamm, 1998; Mumford et al., 2000). The successive inability to address these root causes was rightly summed up by the World Health Organization (WHO) that it is due to "(the) toxic combination of bad policies, economics, and politics...that a majority of people in the world do not enjoy the good health and that primary health care, which integrates health in all of government's policies, is the best framework for doing so" (WHO, 2008, p. 3).

One of the principles of Primary Health Care is community participation which facilitates partnership, cooperation, and group approach for common holistic development of Public health interventions (WHO, 2009). Without mincing words, the "bad policies" referred to by the World Health Organization were developed based on findings of several researches that largely accorded minimal focus on collaborative leadership (Alexander et al., 2001). The performances of Public health programs are determined by factors within and outside the health sector and health system (WHO, 2009). This underscores the need for assessing the strengths, weaknesses, opportunities and threats for both the internal and external environment in order to identify all the relevant stakeholders particularly in the implementing communities,

and brain storm to come up with a plan that is holistically in tandem with systems thinking approach (WHO, 2009). However, reports from several studies indicated that the abysmal performance of public health interventions is as a result of the lack of involvement of community gate keepers, and other relevant community based structures and organizations indicating lack of systems thinking approach (Gamm, 1998; Mumford et al., 2000). The lack of common plan could easily result in duplication of efforts and waste of scarce resources by various stakeholders.

When assigning responsibilities, it should be in line with the competences and capabilities of all stakeholders and agreed upon during pre-planning meetings and the development of plan of action. Failure for balancing and fair apportioning of authority among the stakeholder could easily result in demotivation among stakeholders which may lead to inter-agency/organizational conflicts, low commitment and ineffective program outcome (Alexander et al., 2001; Gamm, 1998).

All planning and implementation efforts need to be preceded by community diagnoses where members of community members are not just engaged in identifying their felt needs, but also be asked to prioritize them, and suggest how best to address them. This allows for a dialogue on technical options from public health experts and the community views in terms of the cultural beliefs, so that adequate understanding is reached with clear roles and responsibility for both sides. Failure to build partnership in this approach could lead to mistrust between the community and the technical coalition of stakeholders, labeling of the intervention as their program and not our program. Even where the intervention is successful, there will be challenges with sustainability after the funding agencies withdraw their funds for any reason (Alexander et al., 2003; Health Reform Foundation of Nigeria, 2007; Horowitz et al., 2009).

Furthermore, if the implementing communities have cultural values of consensus approach to decision making process on issues that relates to common good of the community, failure to take into consideration their views will be taken as a direct affront to their heritage and will further make them alienate the technical and donor groups which will invariably impact negatively on the participation of the members of the community (Israel et al., 1998; Murray, 2011). It is therefore important for the leaders of public health program to take adequate time to orientate all stakeholders on the aims and objectives of the program and what the expected role of each stakeholder is. Programs that failed to conduct systematic orientation of all concerned partners were reported to have suffered in house frictions, poor commitment to oversight functions and low accountability (Folta et al., 2012; Roussos and Fawcett, 2000; Mitchell and Shortell, 2000). This orientation effort must be backed by continued review and feedback to keep the tempo and dispel misconceptions and assumptions (Alexander et al., 2003).

Finally the core and central contributory factor to failure of some public health programs is the lack of collaborative and participatory leadership approach of public health authorities and implementing agencies as they failed to provide avenues for staff and followers (members of the community) to provide additional insights and make them feel that their suggestions and contributions will be factored into the plan of action (Alexander et al., 2001; Mumford et al., 2000). Ignoring of staff and community views will result in failure to identify and own the plan of action and non-participation.

### **Paradigm shift towards a unified public health leadership approach**

Our unified public health leadership approach is developed based on the identified gaps in literature review which includes lack of

system thinking for holistic approach to planning (Gamm, 1998; Mumford et al., 2000); lack of consideration for the views of followers and workers (Alexander et al., 2001; Mumford et al., 2000); poor sharing of power among stakeholders of a given population based intervention program (Alexander et al., 2001; Gamm, 1998); lack of proactive engagement of communities (Alexander et al., 2003); lack of orientation for all stakeholders for accountability (Folta et al., 2012; Roussos and Fawcett, 2000; Mitchell and Shortell, 2000); decisions not guided by background context (Israel et al., 1998) and leadership style not in consonance with customs of the community (Murray, 2011).

Our unified leadership approach is a cocktail of various leadership theories cashing on their strengths in order to reduce the weakness in various leadership approaches. Moreover, our unified leadership approach uses health system thinking as the foundation for all the approaches. The approach is based on our belief and understanding that attaining health and wellbeing is beyond the statutory function of the Ministry of Health and aligns with systems thinking method. This is because the determinants of health and wellbeing are influenced by the physical, social, chemical, cultural and economic factors in addition to the genotypic make up of each person (WHO, 2008). It is therefore a biosocio-economic, political and cultural context of where an individual is born, develop, live, work, his/her health related behaviors (intimate sexual acts, diet, exercise, tobacco, alcohol and drugs) in conjunction with socio-economic standing and access to health capitals (WHO, 2008). These context requires leaders to understand that health programs are affected by both factors within and outside of the health system and are responsible for the continued reported health inequalities and disparities within and between a given place and time (Bezruchka, 2010; WHO, 2008). Therefore decision making process in the unified leadership approach calls for leaders to scan both the internal and external environment to outline the strengths, weakness, threats and opportunities in order to ensure a holistic assessment of operationalization of public health programming and the inclusion of all stakeholders (Mumford et al., 2000; WHO, 2009; Zaleznik, 2004). This allows one to understand the background context including the current attitude and behaviors so that a multi-prong leadership approach will ultimately provide a level playing field, understanding, collaboration and commitment of all stakeholders towards common program objectives and goals (Leischow and Milstein, 2006).

In order to ensure better trust, respect and collaboration with implementing communities unified leadership approach will promote the engagement and participation of community leaders and other gate keepers. In addition, the aim is also to canvass for understanding, diagnosis of the problem, jointly participate in the planning in order to see the problem as theirs and to ensure that the local cultural beliefs are taken into consideration (Alexander et al., 2001, 2003). Moreover, it also provides opportunity to canvass for local resources (volunteers, funds, office space) from the community.

Finally, the unified leadership approach utilizes the skills and competencies of each stakeholder in order to match competencies/skills with task that will be assigned to each of the stakeholders which is in tune with the skills approach in organizational leadership. The skill approach is underscored by the fact that leadership competency can be improved through training and retraining particularly in both technical and managerial areas (Nahavandi, 2012). The skills approach in the unified leadership approach is necessary because public health has its foundation in epidemiology and biostatistics, driven by data and its effectiveness is based on agreed process and monitoring indicators that are designed in line with the plan of action (Koh, 2009). The skills approach is therefore a necessary competence of public health experts in order to have a systematic approach to identifying

problems (problem solving skills), analyze available strategies to address the problem (social judgmental skills), and how to lead and coordinate the human resources (social skills) mainly guided by high coaching and high directive leadership behavior which will improve skills and motivate staff and followers into leadership positions (Nahavandi, 2012).

#### **How the unified leadership approach addressed the gaps in the literature review**

The participation of all relevant stakeholders is necessary for the success of any community based interventions that is directed at reducing morbidity, mortality and disability (Nahavandi, 2012). In order to canvass for acceptance and participation of members for any given population level public health intervention, there is the need for a systematic and proactive engagement of all stakeholders at all levels.

Depending on the public health issues and the cultural beliefs regarding a particular health issue, there is the need to identify community gate keepers such as religious, traditional, opinion and political leaders including the leadership of community based organizations and other funding agencies that have interest on the issue being considered for intervention. These groups of community gate keepers are revered by people in their communities who look up to them for guidance. They also tend to have a good understanding of the local customs, norms and traditions and will provide better insights on the inner thinking of their community members to guide the selection of appropriate strategies for planned intervention.

Furthermore, sensitization and reorientation of community gate keepers like religious leaders will make them include topical public health issues in their weekly sermons to canvass for support and behavioral change of their followers. Overall, the inclusion of all stakeholders and partners in the decision making process and program planning, implementation and monitoring has potential for strengthening ownership, commitment, resource mobilization and oversight function towards the desired program goals (Center for Health Promotion, 2007).

The approach also provides opportunity to have frank discussions with members of the community and the technical team so that concerns are addressed, adequate information regarding the planned intervention is shared before the development of plan of action which will ultimately facilitate the success of the program as was reported in Canada (Macaulay et al., 1997) and India (National Informatics Centre, 2005).

The success of any public health program is greatly determined by both factors within and outside the Public Health Department and the Ministries of Health (WHO, 2009) and therefore indicating significant interconnectivity with not only the units in the Health Ministry but also with other sectors outside the realm of the Ministry of Health with several actors whose organizational objectives might not be exactly the same with that of the Public Health authority, thereby underscoring the need for collaboration, integration and holistic approach to planning and implementation of public health population based interventions (WHO, 2009).

#### **Visual representation of the proposed unified public health leadership approach**

The unified leadership approach not only promotes proactive engagement of all stakeholders but also takes into consideration both internal and external factors that could influence the operationalization of any public health intervention with a view to strengthening intersectoral collaboration, and stronger network of

groups with common characteristics and interest in line with the Leadership Member Exchange and the Social network theory (Nahavandi, 2012; Sparrowe and Liden, 2005) (Figure 1). It also provides avenue for development of common plans with all stakeholders including community gate keepers, community based structures, NGOs, Public and private interest groups. It provides avenue for blending of technical information with cultural, political and economic context as well as the input from staff and subordinates of the leader with regular feedback and review meetings to bring all on the same page during the life time of the program.

#### **EMPIRICAL EVALUATION OF THE UNIFIED PUBLIC HEALTH LEADERSHIP APPROACH**

Qualitative and quantitative research methods will be used to evaluate the performance of leadership approach (Avolio, et al., 2009). Public health programs will be selected based on location and diversity of the staff and community members. Within each selected program and respective location, the followers and staff will be stratified and selected using multistage and proportionate to size sampling techniques. Where the number of the target population that have met the eligibility/inclusion criteria has exceeded the desired sample size based on the weighted population of a selected site in relation to the overall total target population of all selected sites, then participants will be selected using random sampling technique using list of all staff and line list of households and the table of random numbers (Frankfort-Nachmias and Nachmias, 2008). The data collection should explore for insights of the participants on the various aspects of the unified leadership approach and should focus on the key leadership themes: system thinking, vision, power sharing, process based and collateral leaderships as was similarly done to assess the performance of collaborative leadership in community based public health interventions (Alexander et al., 2001, 2003). The results should be reported in narrative form and simple descriptive statistics depending on the aim of each question (Frankfort-Nachmias and Nachmias, 2008).

The quantitative method in the form of quasi-experimental/interventional design is appropriate to assess the performance of interventions relating to leadership theories (Avolio et al., 2009). The choice of the design depends on local scenario, type of intervention, duration of intervention and objectives of the evaluation and may take the form of no control group design, post intervention only design, or nonequivalent control group design. In particular the pre-test post-test using non-equivalent control design has been used to build the skills of technical staff to improve the service delivery such as immunization staff performance in Turkey (Uskun et al., 2008), several African countries (Mutabaruka et al., 2010), and in Kansas State, USA (Paschal et al., 2008) and risk reduction among automobile workers in the United Arab Emirates (Ruslan et al., 2010) which further support the appropriateness of

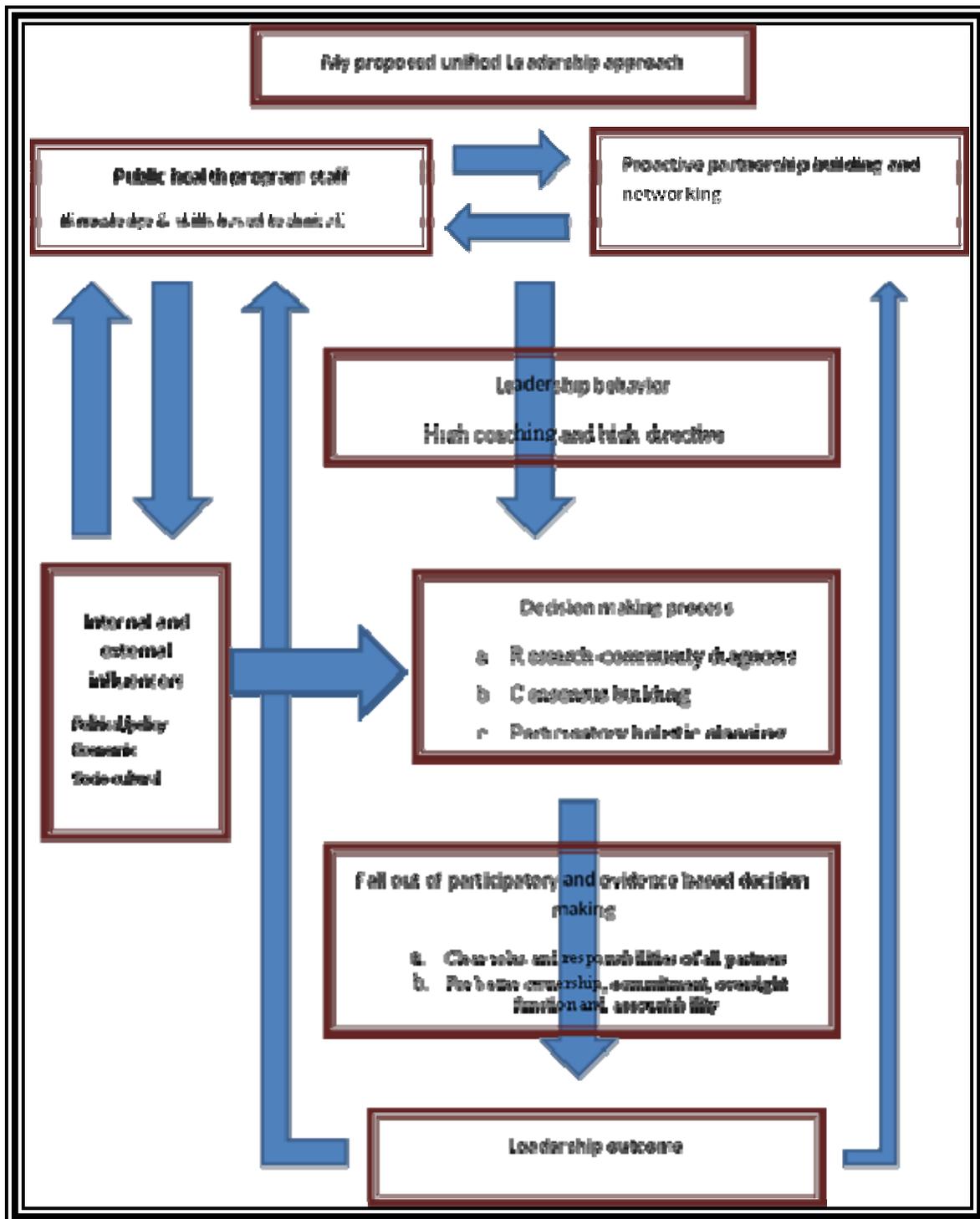


Figure 1. Visual representation of the proposed unified public health leadership approach.

our planned sampling method of evaluation. The intervention group will be exposed to the unified leadership approach while the control will only be

exposed to the leadership theory after the evaluation of the theory in order to fulfill ethical requirements (Frankfort-Nachmias and Nachmias, 2008). The target

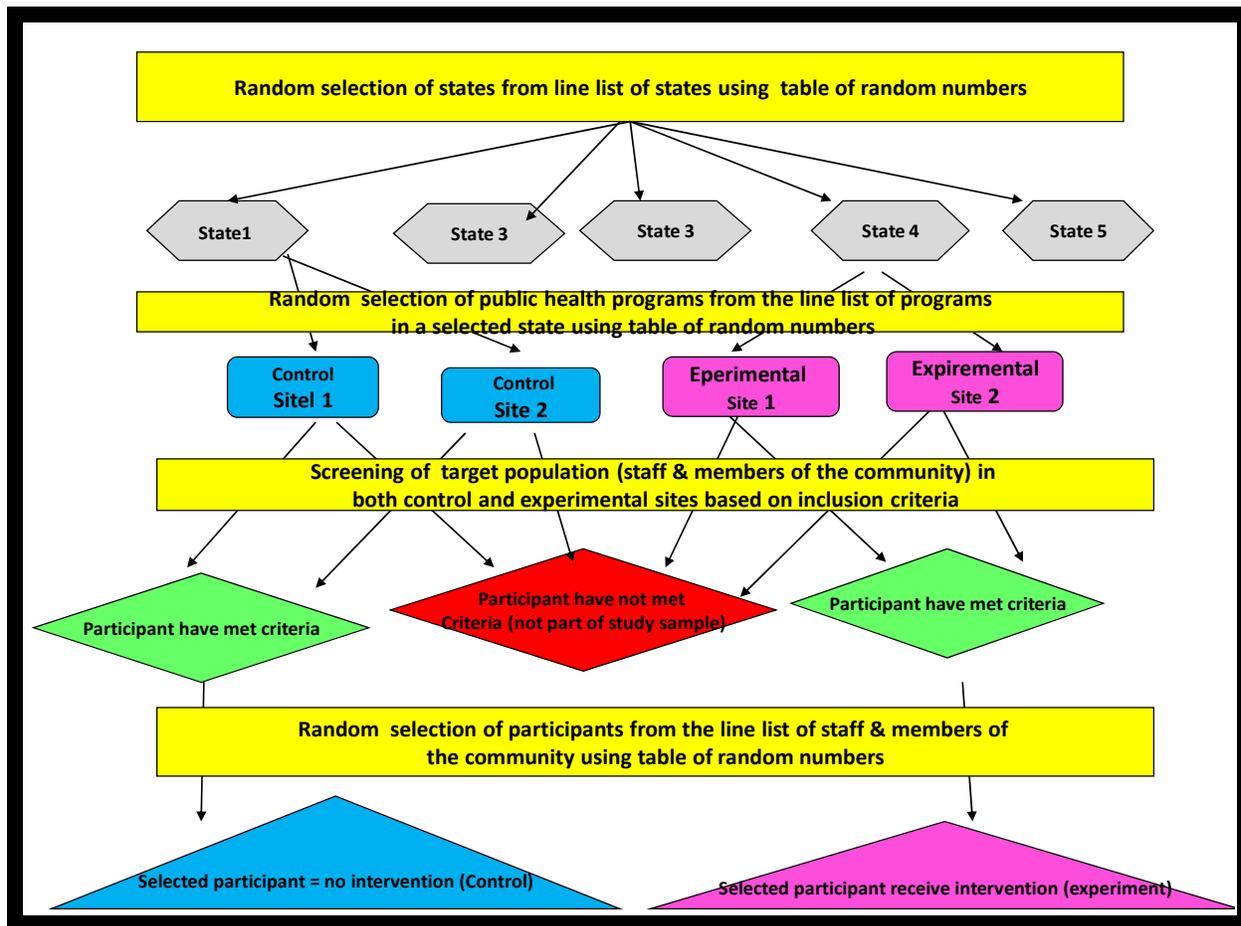


Figure 2. Sampling strategy.

population will include program staff and members of the community who will be selected using a multistage sampling technique.

### Sampling strategy

**Stage 1:** Random selection of states from line list of states (provinces) using table of random numbers.

**Stage 2:** Random selection of public health programs from the line list of programs in a selected state using table of random numbers.

**Stage 3:** Screening of target population (staff and members of the community) in both control and experimental sites based on inclusion criteria.

**Stage 4:** Random selection of participants from the line list of staff and members of the community using table of random numbers (Figure 2).

The analysis will include bivariate (Avolio et al., 2009), Pearson product momentum correlation, and hierarchical multivariate logistic regression analysis (Hana et al., 2012).

### Conclusion

Public health problems are complex and the performance of public health programs and leadership is usually influenced by both internal and external environment and hence requires the collaboration of several partners and in particular the implementing communities. Previous research efforts on collaborative leaders though have covered partnership but there is a dearth of literature on the best leadership approach that makes partnership effective (Koh and Jacobson, 2009). Furthermore, literature review done in this work indicated similar gaps which accounted for poor outcome of some partnership to enhance community health. Based on the identified gaps, a unified leadership approach that is based on systems

thinking approach, skills approach, collaborative and participative decision making process driven by high coaching and high directive behavior is proposed. The evaluation of our unified public health leadership requires both qualitative and quantitative method. The data from the quantitative designs could be analyzed using correlational and multiple regression statistic methods. A qualitative study design is necessary to shed more light, on the views of program staff and community members with thematic areas for analysis to include system thinking, vision, power sharing, process based and collateral leaderships and will be reported using narrative method and descriptive statistics.

### Conflict of Interests

The author(s) have not declared any conflict of interests.

### REFERENCES

- Alexander JA, Comfort ME, Weiner BJ, Bugue R (2001). Leadership in collaborative community health partnership. *Non-Prof. Man. Lead.* 2(2):159-174.
- Alexander JA, Weiner BJ, Mertzner ME, Shortell SM, Bazzoli BJ, Hosnain-Wynia R, Sofaer S, ConDA (2003). Sustainability of collaborative capacity community health partnership. *Med. Car. Res. Rev.* 60(4):130s-160s. <http://dx.doi.org/10.1177/1077558703259069>; PMID:14687432
- Avolio BJ, Walumbwa FO, Weber TJ (2009). Leadership: Current theories, Research and future directions. *Ann. Rev. Psych.* 60(1):421-449. <http://dx.doi.org/10.1146/annurev.psych.60.110707.163621>; PMID:18651820
- Bezruczka S (2010). Health equity in the U.S. *Soc. Alter.* 2(2):50-56.
- Bruno LFC, Eduardo GEL (2006). Personal values and leadership effectiveness. Retrieved from [http://www.g-casa.com/download/Bruno\\_Personal\\_Values\\_Leadership.pdf](http://www.g-casa.com/download/Bruno_Personal_Values_Leadership.pdf)
- Burke CS, Stagl CS, Klean C, Goodwin GF, Silas E, Halpin SM (2006). What type of leadership behavior are functional in teams? A meta-analysis. *Lead. Quart.* 17:288-307. <http://dx.doi.org/10.1016/j.leaqua.2006.02.007>
- Gamm LD (1998). Advancing community health through community health partnerships. *J. Health Car. Manage.* 43(1):51-66.
- Folta SC, Seguin RA, Ackerman J, Nelson M (2012). A qualitative study of leadership charismatics among women who catalyze positive community change. *BMC Pub. Hlth.* 12:383.
- Frankfort-Nachmias C, Nachmias D (2008). *Research methods in the social sciences.* New York: Worth Publishers.
- Hana J, Maleta K, Kirkhaug R, Hasvold T (2012). PHC Leadership: Are health Center's in good hands? Perspective from three districts in Malawi. *Malawi Med. J.* 24(3):46-51. PMID:23638273 PMID:PMC3576831
- Health Reform Foundation of Nigeria (2007). *Primary Health Care in Nigeria: 30 years after Alma-Ata.* The Nigerian Health review 2007. Health Reform Foundation of Nigeria, Mmm-nat Educational Window Consultant Ltd, Nigeria, Abuja
- Horowitz CR, Robinson M, Seifer S (2009). Community-Based Participatory Research From the Margin to the Mainstream: Are Researchers Prepared? *Circulation.* 119:2633-2642. <http://dx.doi.org/10.1161/CIRCULATIONAHA.107.729863>
- Ioannidou F, Konstantikati V (2008). Empathy and emotional intelligence; What is it really about? *Int. J. Car. Sc.* 1(3):118-123.
- Israel BA, Schulz AJ, Parker EA, Becker AB (1998). Review of community based research: Assessing partnership approaches to improve public health. *Ann. Rev. Pub. Hlth.* 19:173-202. <http://dx.doi.org/10.1146/annurev.publhealth.19.1.173>; PMID:9611617
- Koh H, Jacobson M (2009). Fostering public health leadership. *J. Pub.Hlth.* 31(2): 199-201. <http://dx.doi.org/10.1093/pubmed/fdp032>
- Koh H (2009). Leadership in public health. *J. Can. Edu.* 24: S11-S18. <http://dx.doi.org/10.1080/08858190903400385>
- Krishnan VR (2005). Leader-member exchange, transformational leadership and value system. *Elec. J. Buss.Eth.Org.Stud.* 10(1):14-21.
- Leischow SJ, Milstein B (2006). Systems Thinking and Modeling for Public Health Practice. *Am. J. Pub. Hlth.* 96(3):403-405. <http://dx.doi.org/10.2105/AJPH.2005.082842>
- Macaulay AC, Paradis G, Potvin L, Cross EJ, Saad-Haddad C, McComber A, Desrosiers S, Kirby K, Montour LT, Lamping DL, Leduc N, Rivard M (1997). The Kahnawake Schools Diabetes Prevention Project: Intervention, Evaluation, and Baseline Results of a Diabetes Primary Prevention Program with a Native Community in Canada. *Prev. Med.* 26(6):779-790. <http://dx.doi.org/10.1006/pmed.1997.0241>; PMID:9388789
- Mitchell SM, Shortell SM (2000). The governance and management of effective community health partnership: A topology for research, policy and practice. *Mil. Quart.* 78(2):241-289. <http://dx.doi.org/10.1111/1468-0009.00170>; PMID:PMC2751154
- Mumford MD, Zaccaro SJ, Harding FD, Jacobs TO, Fleishman EA (2000). Leadership skills for a changing world: Solving complex social problems. *Lead. Quart.* 11(1):11-35. [http://dx.doi.org/10.1016/S1048-9843\(99\)00041-7](http://dx.doi.org/10.1016/S1048-9843(99)00041-7)
- Murray A (2011). *Leadership styles: Adapted from Wall Street Journal's Guide to Management.*
- Mutabaruka E, Dochez C, Nshimirimana D, Meheus A (2010). Evaluation of mid-level management training in immunization in the African region. *East Afr. J. Med.* 7(1):39-45.
- Nahavandi A (2012). *The art and science of leadership* (6th ed.). Upper Saddle River, NJ: Pearson Paschal AM, Oler-Manskey J, Kroupa K, Snethen E (2008). Using a community based participatory approach improve the performance capacity of local health departments: The Kansas immunization technology project. *J. Comm. Hlth.* 33:407-416. <http://dx.doi.org/10.1007/s10900-008-9116-6>
- Roebuck C (2011). *Developing effective leadership in NHS: A short report for Kings Fund.*
- Roussos ST, Fawcett SB (2000). A review of collaborative partnerships as a strategy for implementing community health. *Ann. Rev. Pub. Hlth.* 21:369-402. <http://dx.doi.org/10.1146/annurev.publhealth.21.1.369>; PMID:10884958
- Ruslan R, Hashim Z, Ismail IA, Naing L, Nordin R (2010). The implications of a health promotion program on the knowledge and practice of automotive workers exposed to solvent. *Am. J. App. Sci.* 7:661-668. <http://dx.doi.org/10.3844/ajassp.2010.661.668>.
- Sparrowe RT, Liden RC (2005). Two routes to influence: Integrating leader-member exchange and social network perspectives. *Admin. Sci. Quart.* 50(4):505-535.
- Uskun E, Uskun SB, Uysalgenc M, Yagiz M (2008). The effectiveness of training intervention on immunization to increase knowledge of primary health care workers and vaccination coverage rates. *Pub. Hlth.* 122: 949-958.
- World Health Organization (2008). *Inequities are killing people on a grand scale: The Reports WHO's commission on health inequalities.* News Release WHO/29, August 28, WHO, Geneva, Switzerland. Retrieved from <http://www.who.int/mediacentre/news/releases/2008/pr29/en/index.html>
- World Health Organization (2009). *System thinking for health systems strengthening.* Geneva, Switzerland, WHO. Retrieved from [http://whqlibdoc.who.int/publications/2009/9789241563895\\_eng.pdf](http://whqlibdoc.who.int/publications/2009/9789241563895_eng.pdf)
- Zaleznick A (2004). Managers and leaders: Are they different? *Harvard Buss. Rev.* 82(1):74-81.