



# Promises and Pitfalls of Dyads in the National Diabetes Prevention Program: Lifestyle Coach Perspectives

American Journal of Health Promotion  
2022, Vol. 36(7) 1204–1207  
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DOI: 10.1177/08901171221088580  
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## Abstract

**Purpose:** To describe Lifestyle Coach perceptions of dyads (i.e., family members and/or friends) in the National Diabetes Prevention Program (NDPP).

**Design:** Qualitative evaluation of cross-sectional survey responses.

**Setting:** Online.

**Participants:** Lifestyle Coaches (n=253) with experience teaching at least one in-person year-long NDPP cohort at a CDC-recognized organization.

**Measures:** Survey included items on background and experience with dyadic approach, as well as open-ended items on the benefits and challenges observed when working with dyads in the NDPP.

**Analysis:** Lifestyle Coach background and experience were analyzed descriptively in SPSS. Open-ended responses were content coded in ATLAS.ti using qualitative description, and then grouped into categories.

**Results:** Most Lifestyle Coaches (n=210; 83.0%) reported experience delivering the NDPP to dyads. Benefits of a dyadic approach included having a partner in lifestyle change, superior outcomes and increased engagement, and positive “ripple effects.” Challenges included difficult relationship dynamics, differences between dyad members, negative “ripple effects,” and logistics.

**Conclusion:** Lifestyle Coaches described a number of benefits, as well as some challenges, with a dyadic approach to the NDPP. Given the concordance between close others in lifestyle and other risk factors for type 2 diabetes, utilizing a dyadic approach in the NDPP has the potential to increase engagement, improve outcomes, and extend the reach of the program.

## Keywords

diabetes prevention program, qualitative, social context, lifestyle intervention, social support

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## Purpose

Greater attendance at National Diabetes Prevention Program (NDPP) classes is associated with superior health outcomes in the program.<sup>1</sup> Participating alongside a partner may facilitate program attendance and weight loss, particularly for men,<sup>2</sup> and may extend the reach of the NDPP to individuals at risk for type 2 diabetes who otherwise would not receive a referral.<sup>3</sup> The NDPP emphasizes the importance of social support in the curriculum<sup>4</sup>; however, whether joint participation among family and friends (i.e., dyads) is commonplace, and the benefits and challenges associated with such an approach, are unknown. Using data from a large nationwide sample of Lifestyle Coaches, we describe participation of dyads in the NDPP, as well as the perceived benefits and challenges associated with a dyadic approach.

## Methods

### Design

Lifestyle Coaches with experience delivering the NDPP to at least one year-long cohort were eligible for this online survey study. The research team emailed study information, including a link to an online screening form, to contacts at all organizations with Preliminary or Full recognition for their NDPP as designated by the Centers for Disease Control and Prevention (CDC). Of 335 eligible Lifestyle Coaches, 305 participated in the study. The University of Utah Institutional Review Board approved all study procedures and participants reviewed a consent cover letter prior to participation. Lifestyle Coaches received a \$10 electronic gift card for completing a 30-minute questionnaire about their experience delivering the NDPP.

### Sample

Purposeful sampling was used to identify 253 “information rich” cases for the current analysis,<sup>5</sup> operationalized as those who had experience delivering the NDPP in person. The majority of the Lifestyle Coaches analyzed identified as white, non-Hispanic (79.1%), women (94.1%), and had a Bachelor’s degree or higher level of education (88.4%). Most Lifestyle Coaches were from programs with Full CDC recognition (76.3%), indicating program fidelity and effectiveness.

### Measures

Survey items assessed Lifestyle Coach demographics and experience, including an item developed by the research team: “Have you had family members (e.g., partners/spouses, siblings) or friends attend NDPP classes together?” Those who responded “yes” were presented with additional items developed by the team, including two open-ended items on benefits and challenges of a dyadic approach in the NDPP (see [Table S1](#) in online supplement<sup>2</sup>).

## Analysis

Lifestyle Coach background and experience were analyzed descriptively. K.J.W.B. completed all steps of coding and analysis of the open-ended items using a qualitative descriptive approach.<sup>5</sup> L.C., a qualitative methods expert, collaborated in devising the analytic methods and reviewing data, processes, and results. Both K.J.W.B. and L.C. are familiar with the CDC NDPP and have received Lifestyle Coach training. K.J.W.B. first read and re-read all open-ended responses of benefits to working with dyads in the NDPP to formulate initial open coding dimensions. She then coded content of the responses in ATLAS.ti 8 software.<sup>6</sup> Using constant comparison, responses were compared to each other, and informed the development of codes and code descriptions. Codes were revisited and descriptions revised throughout the coding process until all responses were coded.<sup>5,7</sup> Following coding, more abstract categories of meaning were formed by grouping together coded content sharing similar dimensions.<sup>7</sup> After completing this process for the responses to the “benefits” item, K.J.W.B. followed the same procedure for the responses to the “challenges” item.

## Results

Most Lifestyle Coaches (n=210; 83.0%) reported experience delivering the NDPP to dyads (i.e., family members and/or friends). Of those with this experience, 202 responded to the open-ended benefits item and 189 responded to the open-ended challenges item, and thus were included in the coding process described above. Categories summarizing Lifestyle Coach perspectives of benefits and challenges of a dyadic approach are described below, along with example codes. [Table S1](#) presents all codes within each category, as well as frequencies and exemplars of each code.

The most common category of benefit observed was the opportunity to partner with a close other in lifestyle change (e.g., general support, accountability, working together on lifestyle change; n=164; 78.1% of respondents). Lifestyle Coaches also described superior outcomes and increased engagement for participants in dyads (e.g., greater success in lifestyle change, greater motivation or commitment, greater attendance; n=79; 37.6%), as well as positive engagement and lifestyle change “ripple effects,”<sup>8</sup> wherein benefits extended from an individual to the other member of the dyad, broader family/household, and other members in the NDPP class (n=22; 10.5%). Few Lifestyle Coaches observed no or minimal benefits of a dyadic approach (n=3; 1.4%).

A number of Lifestyle Coaches observed no or minimal *challenges* related to a dyadic approach (n=55; 26.2%). The challenges that were observed by Lifestyle Coaches included difficult relationship dynamics (e.g., conflict or disagreement, criticism or “calling out,” one dyad member speaking for the other; n=59; 28.1%); differences between members of the

dyad in success, participation, and readiness for change (n=57; 27.1%); negative “ripple effects,” wherein challenges extended from an individual to the other member of the dyad or the larger NDPP class (n=41; 19.5%); and logistics (e.g., conflicting schedules; n=7; 3.3%).

## Discussion

### Summary

Lifestyle Coaches described a number of benefits, as well as some challenges, among those participating in the NDPP together with a close other. Benefits included increased engagement and improved outcomes, consistent with preliminary work in this area.<sup>2</sup> Although approximately one quarter of Lifestyle Coaches did not perceive significant challenges with a dyadic approach, others reported difficult relationship dynamics and differences between dyad members that interfered with the NDPP process and outcomes.

Effective strategies for working with dyads would be beneficial to include in Lifestyle Coach training. Given the common use of a dyadic approach among Lifestyle Coaches, and the benefits and challenges associated with it, evidence-based training could enable Lifestyle Coaches to more fully harness the benefits of dyadic lifestyle change, enhance participation in classes, and more effectively prevent or navigate potential challenges of dyad participation in the NDPP.

Despite its potential, a dyadic approach may not be recommended in all situations. If members of the dyad vary in their readiness for change or either member does not generally feel supported by the other, individual participation in the NDPP may be more successful. Assessment to determine whether a dyadic approach is recommended, and setting clear expectations and ground rules for each dyad member’s participation in classes when it is, is critical to maximizing the potential benefits and minimizing the potential challenges associated with a dyadic approach to lifestyle change.

### Limitations

Limitations include a focus on Lifestyle Coach perceptions, which may be biased. Lifestyle Coaches were also not asked to differentiate benefits and challenges when just one individual in the dyad was eligible for the NDPP (and the other was a “support person”) vs when both dyad members were eligible for the program. Finally, we were unable to assess sample representativeness given the lack of published data on Lifestyle Coaches.

### Significance

This study highlights the potential utility of a dyadic approach in the NDPP. Whereas there has been extensive consideration of a dyadic approach to chronic illness

management,<sup>9</sup> close others have infrequently been considered in health promotion and chronic illness prevention programs. Given the concordance between close others in lifestyle and other risk factors for type 2 diabetes,<sup>10</sup> a dyadic approach may not only improve engagement and outcomes among participants, but also reach two individuals at risk rather than just one.

### So What?

#### *What Is Already Known on This Topic?*

There is concordance between close others in lifestyle and other risk factors for type 2 diabetes. As such, health promotion and chronic illness prevention programs generally emphasize the importance of social context and social support for lifestyle change.

#### *What Does This Article Add?*

The present study reports on the frequency with which Lifestyle Coaches delivering the National Diabetes Prevention Program use a dyadic approach (i.e., the joint participation of friends and/or family members), and describes their perceptions of the benefits and challenges associated with such an approach.

#### *What Are the Implications for Health Promotion Practice or Research?*

Utilizing a dyadic approach in diabetes prevention and other health promotion programs has promise for increasing engagement, improving outcomes, and extending the reach of lifestyle interventions. However, Lifestyle Coaches should carefully consider whether a dyadic approach is indicated, as well as how to maximize benefits and reduce challenges in practice.

### Author Contributions

K.J.W.B. conceived of the research question, coded and analyzed qualitative data, and drafted this manuscript. T.B. contributed to data acquisition and quantitative data analysis. Y.N. contributed to data acquisition and larger study design. M.G.C., M.C.A., C.R., A.A., C.A.G., N.D.R., and M.S. contributed to the larger study design. L.C. contributed to interpretation of the qualitative coding and analysis. All authors contributed to critical revision of the manuscript, approved the final version submitted, and participated sufficiently in the work to take public responsibility for appropriate portions of the content.

### Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was supported by the National Institutes of Health (grant numbers K23DK115820 [PI: K.J.W.B.], R01DK119478 [PI: N.D.R.], K23MD015088 [PI: M.S.]); a Faculty Pilot Grant from University of Utah's Driving Out Diabetes, a Larry H. Miller Family Wellness Initiative (PI: K.J.W.B.); a Research Incentive Seed Grant from the College of Social & Behavioral Sciences and University of Utah Vice President for Research (PI: K.J.W.B.); and funding from the Undergraduate Research Opportunities Program at the University of Utah (T.B.). N.D.R. acknowledges salary support from Denver Health. The contents of this publication are solely the responsibility of the authors and do not represent official views of the funding organizations.

## Ethical Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. The University of Utah Institutional Review Board approved all study procedures (IRB # 137 848).

## Informed Consent

Informed consent was obtained from all individual participants included in the study.

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## Supplemental material

Supplemental material for this article is available online.

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