

# **ENHANCING SOCIAL SUPPORT FOR SELF MANAGEMENT**

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# Importance and Challenges

- Self-management of activities of daily living and symptom management of illness conditions are crucial skills for health promotion and maintenance.
- Methods to enhance these behaviors in different populations remain variable and individualized.
- Social support associated with healthy eating, physical activity, and weight loss,\* but there is a need for specific information on how different types of support apply to different populations.

\*Cavallo, Tate, Ward, DeVellis, Thayer, & Ammerman, (2014). Social support for physical activity –role of Facebook with and without structured intervention. *Translational Behavioral Medicine*, 4, 346-354

# Aim of Symposium

- To present two reviews and one study of different social support factors and interventions which play a role in enhancing self and symptom management in different populations with chronic conditions.



# Overview of Methods

- Conditions included in these abstracts are:
  - Overweight and obesity in adolescents
  - Chronic illness and conditions, specifically diabetes, cardiovascular disease, neuromuscular disease
  - Psychological disorder
- Reviews include interventions related to social parental support, peer support, and group exercise support.





# Summary Results

- Social support activities found
  - Different parental components affect nutrition consumption and meal planning, skill enhancement, and problem solving
  - Positive effects on quality of life and physical function, and blood pressure as a result of dance
  - High satisfaction with the support group, increased self-efficacy, knowledge, and attitudes in a peer support format

# Conclusion/Implications

- Positive role modeling and specific motivational techniques have an impact on adolescent health behaviors
- Social activity such as dance can have positive effects on improving the quality of life and clinical and psychological symptoms
- Peers who have the same condition can effect positive changes through a group intervention
- Global implications for future study include a need to determine if these social network effects are similar for different populations and could influence how social support may be effective in different cultures

# **Self-management and Weight Loss in Adolescents: A Systematic Review**

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# Learning Objectives

- Identify important parental roles in obese or overweight adolescent's weight loss management





# Background

- Prevalence Of obese youth 34.5%<sup>1</sup>
  - Unmanaged leads to negative metabolic changes<sup>2,3,4,5,6</sup>
  - Obese youth become obese adults<sup>7</sup>
- Annual cost 3 Billion<sup>8</sup>
- Past reviews
  - Did not include SM strategies<sup>9,10</sup>
  - Lacked outcome measurements & results<sup>10</sup>
  - Only looked at electronic interventions<sup>9</sup>
  - Behavioral with pharmacological intervention<sup>11</sup>
  - Found high attrition<sup>9,10</sup>

# Purpose

To develop a better understanding of effective self-management (SM) weight loss strategies for overweight and obese adolescents



# Methods

- Self-management (SM) defined as
  - Setting goals, planning, taking action
- Search retrieved 64 studies with 10 meeting inclusion criteria
- Inclusion criteria: English, aged 10-18 years, RCT aimed at weight loss or weight maintenance
- Excluded drug, surgical, qualitative, reviews
- Studies published 2010-2014
- Jadad Scoring System
  - 11 item instrument; Max 13 points
-

# Results

- Average age 13 years old
- 62.6% Female
- Intervention methodologies varied widely
  - Family/parent involvement
    - Computer based, home based with clinic visits
  - Cognitive Behavioral Therapy (CBT)
  - Motivational Interviewing (MI)
- Combined dietary, physical activity (PA) in in 90% of studies



# Quality of Studies

- None fulfilled all scoring quality requirements
- Range: 7-11 ( $M = 9.2$ ,  $SD = 1.13$ )
- Power calculations stated for 50%
- High attrition
  - Dropouts/withdrawals not stated for 20%
  - Those with power calculations lost power at various stages of study through attrition (40%)

# Outcome Measurements

- 90% included one or more for primary outcomes
  - BMI, zBMI, percent over BMI, BMI percentile, waist to hip ratio, or waist circumference
- Secondary outcomes varied widely
  - psychosocial or behavioral (e.g. dietary, physical activity (PA) knowledge change, peer acceptance, qol)
  - Anthropometric or biological (waist circumference, BP, lipids, percent body fat)

# Intervention Setting Types

- Out of 10 studies 8 had a family component
- Treatment types
  - Family based lifestyle ( $n = 4$ )<sup>12,13,14,15</sup>
  - Group lifestyle & family component ( $n = 2$ )<sup>16,17</sup>
  - School based ( $n = 1$ )<sup>18</sup>
  - CBT<sup>19</sup> ( $n = 1$ )
- Multicomponent in 70% of studies reviewed
  - Goal setting, planning, taking action
  - Combined diet and PA, parental role modeling, encouraging, supporting behavioral change

# Outcomes

- Studies with family component
  - Primary outcomes significant for 7/8 studies
    - Many secondary outcomes significant
    - Effects disappeared in studies of shorter duration
  - Components with family included
    - Role modeling of the parent (diet and PA)
    - Helping with goal setting
    - Setting family goals
    - Dietary and PA skill support
    - Supporting behavioral change
    - Providing positive feedback
    - Boundary setting
    - Booster sessions



# Outcomes

- Family component
  - Separate from child<sup>14,16, 17,18</sup>
    - Group of parents
  - Individual family<sup>13,15</sup>
  - Or combination<sup>12,19</sup>
- Duration
  - 3 sessions to 16 weeks
    - Weekly, biweekly, monthly
    - Length of sessions: 15 min (web)- 75 min/session
- Booster/Maintenance sessions<sup>16,17</sup>
  - Quarterly

# Outcomes

- No study reported the effect of the parent or parental support on the outcomes of child weight
- No study reported the child's perceptions of parental support

# Study Limitations and Strengths

- Limitations
  - Comparing results complicated
    - Various methodological differences
- Strengths
  - Current knowledge provided through rigorous review of RCTs
  - Consistent positive relationships between SM of diet, PA, and weight management
    - Most successful when incorporating a family component



# Conclusion

- Incorporating parent or whole family
  - Well established in children-lacking evidence in adolescents<sup>20</sup>
  - Facilitates dietary, PA, and behavior change<sup>21</sup>
- Multicomponent
  - Combined diet, PA, parent role modeling, goal setting, planning & action for parent/family & adolescent
- Measure family effects on study outcomes



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# References

- <sup>1</sup>Ogden, C. L., Carroll, M. D., Kit, B. K., & Flegal, K. M. (2014). Prevalence of childhood and adult obesity in the United States, 2011-2012. *Jama*, 311(8), 806-814. doi: 10.1001/jama.2014.732
- <sup>2</sup>Centers for Disease Control and Prevention. (2010). Prevalence of abnormal lipid levels among youths — United States, 1999-2006. *MMWR*, 59(2), 29-33.
- <sup>3</sup>Kelly, A. S., Wetzsteon, R. J., Kaiser, D. R., Steinberger, J., Bank, A. J., & Dengel, D. R. (2004). Inflammation, insulin, and endothelial function in overweight children and adolescents: the role of exercise. *J Pediatr*, 145(6), 731-736. doi: 10.1016/j.jpeds.2004.08.004
- <sup>4</sup>Krekoukia, M., Nassis, G. P., Psarra, G., Skenderi, K., Chrousos, G. P., & Sidossis, L. S. (2007). Elevated total and central adiposity and low physical activity are associated with insulin resistance in children. *Metabolism*, 56(2), 206-213. doi: 10.1016/j.metabol.2006.09.014
- <sup>5</sup>Ostchega, Y., Carroll, M., Prineas, R. J., McDowell, M. A., Louis, T., & Tilert, T. (2009). Trends of elevated blood pressure among children and adolescents: data from the National Health and Nutrition Examination Survey 1988-2006. *Am J Hypertens*, 22(1), 59-67. doi: 10.1038/ajh.2008.312
- <sup>6</sup>Hannon, T. S., Rao, G., & Arslanian, S. A. (2005). Childhood obesity and type 2 diabetes mellitus. *Pediatrics*, 116(2), 473-480. doi: 10.1542/peds.2004-2536
- <sup>7</sup>Kelsey, M. M., Zaepfel, A., Bjornstad, P., & Nadeau, K. J. (2014). Age-related consequences of childhood obesity. *Gerontology*, 60(3), 222-228. doi: 10.1159/000356023
- <sup>8</sup>Centers for Disease Control and Prevention. (2010). The childhood obesity epidemic: Threats and opportunities. Public Health Grand Rounds. Retrieved August 23, 2014, from <http://www.cdc.gov/about/grand-rounds/archives/2010/06-June.htm>
- <sup>9</sup>Nguyen, B., Kornman, K. P., & Baur, L. A. (2011). A review of electronic interventions for prevention and treatment of weight and obesity in young people. *Obes Rev*, 12(5), e298-314. doi: 10.1111/j.1467-789X.2010.00830.x
- <sup>10</sup>Stuart, W. P., Broome, M. E., Smith, B. A., & Weaver, M. (2005). An integrative review of interventions for adolescent weight loss. *J Sch Nurs*, 21(2), 77-85.
- <sup>11</sup>Whitlock, E. P., O'Connor, E. A., Williams, S. B., Beil, T. L., & Lutz, K. W. (2010). Effectiveness of weight management interventions in children: a targeted systematic review for the USPSTF. *Pediatrics*, 125(2), e396-418. doi:10.1542/peds.2009-1955

# References

- <sup>12</sup>Berkowitz, R. I., Rukstalis, M. R., Bishop-Gilyard, C. T., Moore, R. H., Gehrman, C. A., Xanthopoulos, M. S., . . . Wadden, T. A. (2013). Treatment of adolescent obesity comparing self-guided and group lifestylejst035
- <sup>13</sup>Bravender, T., Russell, A., Chung, R. J., & Armstrong, S. C. (2010). A "novel" intervention: A pilot study of children's literature and healthy lifestyles. *Pediatrics*, *125*(3), e513-517. doi: 10.1542/peds.2009-1666
- <sup>14</sup>Chen, J. L., Weiss, S., Heyman, M. B., Cooper, B., & Lustig, R. H. (2011). The efficacy of the web-based childhood obesity prevention program in Chinese American adolescents (Web ABC study). *J Adolesc Health*, *49*(2), 148-154. doi: 10.1016/j.jadohealth.2010.11.243
- <sup>15</sup>Duggins, M., Cherven, P., Carrithers, J., Messamore, J., & Harvey, A. (2010). Impact of family YMCA membership on childhood obesity: a randomized controlled effectiveness trial. *J Am Board Fam Med*, *23*(3), 323-333. doi: 10.3122/jabfm.2010.03.080266
- <sup>16</sup>Nguyen, B., Shrewsbury, V. A., O'Connor, J., Steinbeck, K. S., Hill, A. J., Shah, S., . . . Baur, L. A. (2013). Two-year outcomes of an adjunctive telephone coaching and electronic contact intervention for adolescent weight-loss maintenance: the Loozit randomized controlled trial. *Int J Obes (Lond)*, *37*(3), 468-472. doi: 10.1038/ijo.2012.74
- <sup>17</sup>Lloyd-Richardson, E. E., Jelalian, E., Sato, A. F., Hart, C. N., Mehlenbeck, R., & Wing, R. R. (2012). Two-year follow-up of an adolescent behavioral weight control intervention. *Pediatrics*, *130*(2), e281-288. doi: 10.1542/peds.2011-3283
- <sup>18</sup>Johnston, C. A., Tyler, C., Fullerton, G., Poston, W. S., Haddock, C. K., McFarlin, B., . . . Foreyt, J. P. (2007). Results of an intensive school-based weight loss program with overweight Mexican American children. *Int J Pediatr Obes*, *2*(3), 144-152. doi: 10.1080/17477160701305864
- <sup>19</sup>Vos, R. C., Huisman, S. D., Houdijk, E. C., Pijl, H., & Wit, J. M. (2012). The effect of family-based multidisciplinary cognitive behavioral treatment on health-related quality of life in childhood obesity. *Qual Life Res*, *21*(9), 1587-1594. doi: 10.1007/s11136-011-0079-1
- <sup>20</sup>Altman, M., & Wilfley, D. E. (2014). Evidence update on the treatment of overweight and obesity in children and adolescents. *J Clin Child Adolesc Psychol*, 1-17. doi: 10.1080/15374416.2014.963854
- <sup>21</sup>Oude Luttikhuis, H., Baur, L., Jansen, H., Shrewsbury, V. A., O'Malley, C., Stolk, R. P., & Summerbell, C. D. (2009). Interventions for treating obesity in children. *Cochrane Database Syst Rev*(1), Cd001872. doi:10.1002/14651858.CD001872.pub2

# Effects of Dance in Chronic Illness: A Systematic Review

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# Learning Objectives

- Discuss the physiological and psychological benefits of dance in chronic illness
- Increase understanding of dance on enhancing self-management and social support in chronic illness



# Background

- Social and physical activity
- Used therapeutically for thousands of years
- Thought to influence healing



# Background

- It is unknown whether dance impacts health-related outcomes of individuals with chronic illness
- Need to evaluate empirical studies to determine the effectiveness of dance as evidence-based intervention



# Purpose

- This systematic review explored studies on dance and its impact in chronic illness





# Methods

- Literature search via PubMed, EBSCO, and CINAHL
- Inclusion criteria: (a) randomized controlled trial, (b) written in English, (c) published between 2005 and 2014
- Keywords: “dance,” “chronic illness,” “chronic disease,” “diabetes,” “cardiovascular disease”
  - ✓ **147** studies found
  - ✓ Only **10** articles met the inclusion criteria

# Methods

- Jadad scale - used for reporting the quality of published studies
- 3 faculty researchers reviewed the studies separately and reached consensus using the Jadad scoring criteria



# Jadad scoring criteria

Jadad Score Calculation

Articles	1. Was the study described as randomized (this concludes the use of words such as randomly, random, and randomization)?		Additional point: the method to generate the sequence of randomization was described and it was appropriate (table of random numbers, computer generated, etc.)		Deduct a point: the method to generate the sequence of randomization was described and it was inappropriate (patients were allocated alternately, or according to date of birth, hospital/number, etc.)		2. Was the study described as double blind?		Additional point: If for question 2 the method of double blinding was described and it was appropriate (identical placebo, active placebo, dummy, etc.)		Deduct a point: the study was described as double blind but the method of blinding was inappropriate (e.g., comparison of tablet vs. injection with no double dummy)	
	Yes=1	No=0	Yes=1	No=0	Yes=1	No=0	Yes=1	No=0	Yes=1	No=0	Yes=1	No=0
Ruppata et al. 2012	1											
Ruppata et al. 2012	1											
Ruppata et al. 2012	1											
Scholaris et al. 2008	1											
Robles et al. 2008	1											
Rehman et al. 2008	1											
Dyagar et al. 2009	1											
Dyagar et al. 2009	1											
Dyagar et al. 2009	1											
Poser et al. 2013	1											
Poser et al. 2013	1											
Poser et al. 2013	1											
Hackney and Farhart 2009a	1											
Hackney and Farhart 2009a	1											
Hackney and Farhart 2009a	1											
Kalishire et al. 2014	1											
Kalishire et al. 2014	1											
Kalishire et al. 2014	1											
Mavroukou et al. 2010	1											
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Mavroukou et al. 2010	1											
Mervat et al. 2013	1											
Mervat et al. 2013	1											
Mervat et al. 2013	1											
Plininger et al. 2012	1											
Plininger et al. 2012	1											
Plininger et al. 2012	1											
Saied et al. 2005	1											
Saied et al. 2005	1											
Saied et al. 2005	1											

Reviewers:  
 Blue - Ref  
 Pink - True  
 White - False

3. Was there a description of withdrawals and dropouts?		4. Were the objectives of the study defined?		5. Were the outcome measures defined clearly?		6. Was there a clear description of the inclusion and exclusion criteria?		7. Was the sample size justified (e.g., power calculation)?		8. Was there a clear description of the interventions?		9. Was there at least one control (comparison) group?		10. Was the method used to assess adverse effect described?		11. Were the methods of statistical analysis described?		Jadad Score
Yes=1	No=0	Yes=1	No=0	Yes=1	No=0	Yes=1	No=0	Yes=1	No=0	Yes=1	No=0	Yes=1	No=0	Yes=1	No=0	Yes=1	No=0	
1		1		1		1		1		1		1		1		1		9
1		1		1		1		1		1		1		1		1		9
1		1		1		1		1		1		1		1		1		9
1		1		1		1		1		1		1		1		1		10
1		1		1		1		1		1		1		1		1		10
1		1		1		1		1		1		1		1		1		10
1		1		1		1		1		1		1		1		1		9
1		1		1		1		1		1		1		1		1		9
1		1		1		1		1		1		1		1		1		9
1		1		1		1		1		1		1		1		1		8
1		1		1		1		1		1		1		1		1		8
1		1		1		1		1		1		1		1		1		9
1		1		1		1		1		1		1		1		1		9
1		1		1		1		1		1		1		1		1		9
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1		1		1		1		1		1		1		1		1		10
1		1		1		1		1		1		1		1		1		10
0		1		1		1		1		1		1		1		1		7
0		1		1		1		1		1		1		1		1		7
0		1		1		1		1		1		1		1		1		7
0		1		1		1		1		1		1		1		1		9
0		1		1		1		1		1		1		1		1		9
0		1		1		1		1		1		1		1		1		9
1		1		1		1		1		1		1		1		1		11
1		1		1		1		1		1		1		1		1		11
1		1		1		1		1		1		1		1		1		11
0		1		1		1		1		1		1		1		1		8
0		1		1		1		1		1		1		1		1		8
0		1		1		1		1		1		1		1		1		8





# Jadad scoring criteria

Articles	Total score
Baptista et al., 2012	9
Belardinelli et al., 2008	10
Eyigor et al., 2009	9
Foster et al., 2013	8
Hackney & Earhart, 2009	9
Kaltsatou et al., 2014	10
Mavrovouniotis et al., 2010	7
Merom et al., 2013	9
Pinniger et al., 2012	11
Sandel et al., 2005	8



# Results

- Based on Jadad scoring system, scores ranged from 7-11 out of 13 points
- Among individuals with fibromyalgia and congestive heart failure, dance had positive effects on:
  - quality of life (QOL),
  - pain,
  - fatigue,
  - functional capacity

# Results

- Among individuals with depression, anxiety, and Parkinson's disease, dance had positive effects on:
  - QOL,
  - balance,
  - physical function
- Among individuals with hypertension, dance ↓ blood pressure and resting heart rate

# Limitations

- Small sample
- Some studies were not blinded, process of randomization not described



# Implications/Conclusions

- This systematic review provides a summary of the current state of research on the effects of dance in chronic illness
- This review suggests that dance may be a safe and effective intervention in improving QOL, physical function, blood pressure, heart rate, fatigue, depression, and anxiety in different populations worldwide





# References

1. Ritter, M. & Low, K.G. (1996). Effects of dance/movement therapy: A meta-analysis. *Arts in Psychotherapy, 23*(1), 29-260.
2. Berger, V.W. & Alperson, S.Y. (2009). A general framework for the evaluation of clinical trial quality. *Reviews on Recent Clinical Trials, 4*(2), 79-88.
3. Baptista, A.S., Villlela, A.L., Jones, A., & Natour, J. (2012). Effectiveness of dance in patients with fibromyalgia: A randomized, single-blind, controlled study. *Clinical & Experimental Rheumatology, 30* (Suppl. 74), S18-S23.
4. Belardinelli, R., Lacalaprince, F., Ventrella, C., Volpe, L. & Faccenda, E. (2008). Waltz dancing in patients with chronic heart failure: New form of exercise training. *Circulation Heart Failure, 1*, 107-114. doi: 0.1161/CIRCHEARTFAILURE.108.765727

# References

5. Carbonelli-Baeza, A. Aparicio, V.A., Martins-Pereira, C.M., Gatto-Cardia, C.M., Ortega, F.B., Huertas, F.J., Tercedor, P., Ruiz, J. R., & Delgado-Fernandez, M. (2010). Efficacy of Biodanza for treating women with fibromyalgia. *Journal of Alternative and Complementary Medicine, 16*(11), 1191-1200.
6. Kaltsatou, A., Kouidi, E.I., Anifanti, M.A., Douka, S.I. & Deligiannis, A.P. (2014). Functional and psychosocial effects of either a traditional dancing or a formal exercising training program in patients with chronic heart failure: A comparative randomized controlled study. *Clinical Rehabilitation, 28*(2), 128-138. DOI: 10.1177/0269215513492988
7. Hackney, M.E. & Earhart, G.M. (2009). Health-related quality of life and alternative forms of exercise in Parkinson's disease. *Parkinsons & Related Disorders, 644-648*. doi:10.1016/j.parkreldis.2009.03.003
8. Eyigor, S., Karapolat, H., Durmaz, B., Ibisoglu, U., & Cakir, S. (2009). A randomized controlled trial of Turkish folklore dance on the physical performance, balance, depression, and quality of life in older women. *Archives of Gerontology and Geriatrics, 48*, 84-88.

# References

9. Foster, E.R., Golden, L., Duncan, R.P., & Earhart, G.M. (2013). Community-based Argentine Tango dance program is associated with increased activity participation among individuals with Parkinson's disease. *Archives of Physical Medicine and Rehabilitation*, 94, 240-29.
10. Mavrovouniotis, F.H., Argiriadou, E.A., & Papaioannou, C.S. (2010). Greek traditional dancers and quality of old people's life. *Journal of Bodywork & Movement Therapies*, 14, 209-218.
11. Pinninger, R., Brown, R.F., & Thorsteinsson, E.B. (2012). Argentine tango dance compared to mindfulness medication and waiting-list control: a randomized trial for treating depression. *Complementary Therapies in Medicine*, 20, 377-384.
12. Maruf, F.A., Akinpelu, A.O., & Salako, B.L. (2013). Effects of aerobic exercise and drug therapy on blood pressure and antihypertensive drugs: A randomized controlled-trial. *African Health Sciences*, 13(1), 1-9.

# **The Effects of a Diabetes Support Group Among Underserved: A Feasibility Study**

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# Background

- Diabetes is a global health care problem with increasing numbers in all countries.
- Underserved diverse individuals in the United States are among the hardest hit by diabetes, having higher rates of diabetes and poorer outcomes (1-6).
- Good self-management can improve glucose control and improve diabetes complications.
- However, this can be challenging to achieve due to multiple factors among the underserved (1-6).
- Peer support has been shown to improve glucose control and provide an avenue to develop self-care activities to promote health (7-9).

# Purpose of Study

- To test the feasibility and examine the effects of a diabetes support group on underserved individuals with type 2 diabetes at a Federally Qualified Health Care Clinic.



# Methods

- The study used a pretest/posttest design to examine diabetes knowledge, diabetes attitude, and empowerment, after a 6-week support group intervention.
- Feasibility and acceptability of the support group intervention was assessed by examining ease of recruitment, retention rates, and overall satisfaction.

# Intervention

Recruited from a Federally Qualified Healthcare Center

Weekly meetings at the clinic for 6 weeks with educational topics:

Exercise

Diet and Nutrition

Emergencies

Foot and Wound Care

Medications

Dental



# Results

Female (total n = 10)	70%
Mean age	52.80 (sd = 9.25)
Years Diagnosed	6 (sd = 8.86)
Mean BMI	30.53 (sd = 8.30)
Married/Domestic Partner	60%
Test Blood Sugar	50%
Insulin Use	70%
HTN	60%

# Results

	Pre- Intervention	Post- Intervention	Sig (2-tailed)
Diabetes Knowledge Test	10.7 (sd =3.06)	18.9 (sd =1.79)	.000
Diabetes Attitude Scale	3.65 (sd =.35)	4.05 (sd =.27)	.006
Diabetes Empowerment Scale	3.84 (sd = .61)	4.60 (sd =.55)	.000

# Results

- Recruitment
  - Total of 14 participants were recruited by the clinic
- Retention
  - Total of 10 participants completed all 6 classes
    - 1 was lost to an out of state move
    - 1 was lost to hospitalization
    - 2 were lost for unknown reasons (they were a couple)
- Overall Satisfaction
  - 100% Very satisfied with the overall of process of the program
  - 100% Very satisfied with the content of the sessions
  - Suggested meeting once per month
  - Like least was that weekly sessions were over
  - Like most was the social/peer interaction

# Conclusion

- Findings from this feasibility study suggest that a diabetes support group can have a positive effect on underserved individuals and may result in increased diabetes knowledge, positive changes in attitude over the disease and increased empowerment/self-efficacy. Also, peer support programs can have global implications by improving diabetes self-care.



# References

1. Mokdad, A.H., Bowman, B.A., Ford, E.S., Vinicor, F., Marks, J.S., Koplan, J.P. (2001). The continuing epidemics of obesity and diabetes in the United States. *Journal of the American Medical Association*, 286, 1195-1200.
2. Black, S.A. (2002). Diabetes, diversity, and disparity: What do we do with the evidence? *American Journal of Public Health*, 92, 543-548.
3. Saydah, S., & Lochner, K. (2010). Socioeconomic status and risk of diabetes related mortality in the U.S. *Public Health Reports*, 125, 377-388.
4. Hu, R., Shi, L., Rane, S., Jinsheng, Z., & Chen, C.C. (2014). Insurance, racial/ethnic, SES-related disparities in quality care among US adults with diabetes. *Journal of Immigrant and Minority Health*, 16, 565-575.
5. Lanting, L.C., Joung, I.M., Mackenbach, J.P., Lamberts, S.W., Bootsma, A.H. (2005). Ethnic differences in mortality, end-stage complications, and quality of care among diabetic patients: a review. *Diabetes Care*, 28, 2280-2288.
6. Wild, S.H., McKnight, J.A., McConnachie, A., Lindsay, R.S. (2010). Socioeconomic status and diabetes-related hospital admissions: a cross-sectional study of people with diagnosed diabetes. *Journal of Epidemiology and Community Health*, 64, 1022-1024.
7. Wulp, V.D., de Leeuw, J.R.J., Gorter, K.J., Rutten, G.E.H. (2012). Effectiveness of peer-led self-management coaching for patients recently diagnosed with Type 2 diabetes mellitus in primary care: A randomized controlled trial. *Diabetic Medicine*, 29, e390-e397.
8. Thom, D.H., Ghorob, A., Hessler, D., De Vore, D., Chen, E., Bodenheimer, T.A., (2013). Impact of peer health coaching on glycemic control in low-income patients with diabetes: A randomized controlled trial. *Annals of Family Medicine*, 11, 137-144.
9. Philis-Tsimikas, A., Adelaide, F., Lieva-Ocana, L.L., Walker, C., Gallo, L.C. (2011). Peer-led diabetes education programs in high-risk Mexican Americans improve glycemic control compared with standard approaches. *Diabetes Care*, 34, 1926-1931.