ORIGINAL ARTICLE

Women's Perception about the Benefits and Barriers to Exercise

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ABSTRACT

Objective: Physical exercise has been shown to protect against a wide range of degenerative and life-threatening illnesses. Men in Mosul are more physically active than women, according to recent research. The goal of this research was to find out if the women value exercise and whether there are any obstacles in their way.

Methods: The research included 400 female participants were chosen from university of Mosul, Iraq, all between the ages of 25 and 60. Physical activity-related questions were answered by women, and comments on the advantages and disadvantages of exercise were evaluated by them.

Results showed that 70% of those who took part in the research did not engage in any physical activity. Physical, psychological, and social health advantages, environmental and personal obstacles, and timelessness were the perceived benefits and hurdles to exercise in order of importance.

Conclusion: To some degree, the attitudes of Mosulian women toward exercising may be explained by the findings. Further research using bigger samples is required.

Keywords: Women, Exercise, Health benefits.

INTRODUCTION

Physical activity helps women live longer and better by reducing their risk of chronic diseases like osteoporosis, diabetes, depression, and cardiovascular disease. 1-2 Industrialization, urbanization, and economic progress have all contributed to a rise in physical inactivity, particularly in developing countries. 3 Literature suggests that recognizing and addressing physical activity barriers is particularly critical for some groups, such as women, low-income individuals, and the elderly. Women of all ages and ethnicities have been found to be inactive, and the risk of being sedentary is higher in middle-aged women than younger women and males. 7 Men, according to recent research, engage in more physical exercise than women. 8-¹⁰ In accordance with the Turkish National Burden of Disease Report, physical inactivity affects 70.0 percent of women aged 15-29, 30.4%, 45.9%, and 60.0% of women aged 60-69. 10 Efforts to promote or encourage adults to engage in regular physical activity have continued, whether in the United States or elsewhere. According to Brown et al., current research on the link between physical exercise and women's health needs to be updated. They noticed disparities between men and women in terms of energy expenditure patterns in paid and unpaid employment, commuting, and leisure time. 11 Cultural standards have an impact on a woman's physical activity objectives. Due to these differences in sincerity, it is expected that people's perspectives and experiences with physical activity will differ. To our knowledge, there are limited studies about the benefits and barriers of exercise in Mosul women. 13-14 Purpose of this study were to determine the benefits and barriers to exercise in Mosulian women.

METHODS

This a cross-sectional study was applied in University of Mosul. The research for this project was guided by the Helsinki Declaration. Before informed permission was acquired, each participant was fully told about the study's methods. Volunteer women aged 24-60 (mean SD=37.13 ±10.34 years) were recruited for the research and given a

series of questions regarding their involvement in physical activity. Initial socio-demographic data was collected, including things like height and weight (as well as educational attainment). In the second step, participants were asked whether they engage in aerobic activity (such as walking or running), and those who did were asked how often they exercised each week on average. Women who exercised fewer than three times a week were labeled as irregular exercisers because of this. Subjects were asked to evaluate statements on the advantages and obstacles to exercise in the last two sections of the questionnaire by saying "I agree" or "I disagree." Statements' content was influenced by prior women's research. 15-18 The same interviewer performed all the interviews in Mosulian, and they all took 10 minutes to complete. SPSS 10.0 was used to analyze the data. Descriptive statistics were used to show the perceived health advantages and obstacles of physical exercise. The information presented here is preliminary and should be used to determine if Mosulian women perceive any obstacles to becoming physically active.

RESULTS

Table 1 displays information about the women's demographics. Research participants were forced to exercise sporadically in 30% of cases, whereas study participants were not forced to exercise at all in 70% of cases. Women were married at a rate of 61%. Among all participants, physical health advantages were recognized by 99%, social health benefits by 95%, and psychological health benefits by 94% when ordered from highest to lowest (Table 2). Women who exercised irregularly as well as those who did not were surveyed about their perceptions of the health advantages of exercise. Women's physical health advantages (100-98%), social health benefits (95%), and psychological health benefits (95-93 %) were all ranked similarly in both groups regularly exercising women and non-exercising women) (Table 3).

Table 1. Sociodemographic characteristics of women.

25-40 70 41-60 30 Exercise status	rable 1. Sociodemographic characteristics of women.	
25-40 70 41-60 30 Exercise status		%
41-60 30 Exercise status 33 Exercising 33 Non-exercising 67 Body mass index (kg/m²)	Age distribution (years)	
Exercise status 33 Exercising 33 Non-exercising 67 Body mass index (kg/m²)	25-40	70
Exercising 33 Non-exercising 67 Body mass index (kg/m²)	41-60	30
Non-exercising 67 Body mass index (kg/m²)	Exercise status	
Body mass index (kg/m²) Irregular Exercising women 55 25-30 28 30-35 8 >35 6 Non-exercising women 60 25-30 24 30-35 5 >35 11 Marital status 33 Married 61	Exercising	33
Irregular Exercising women ≤25 55 25-30 28 30-35 8 >35 6 Non-exercising women 60 25-30 24 30-35 5 >35 11 Marital status 33 Married 61	Non-exercising	67
≤25 55 25-30 28 30-35 8 >35 6 Non-exercising women 60 25-30 24 30-35 5 >35 11 Marital status 33 Married 61	Body mass index (kg/m ²)	
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>35 6 Non-exercising women 6 ≤25 60 25-30 24 30-35 5 >35 11 Marital status 5 Single 33 Married 61	25-30	28
Non-exercising women 60 ≤25 60 25-30 24 30-35 5 >35 11 Marital status Single Single 33 Married 61	30-35	8
≤25 60 25-30 24 30-35 5 >35 11 Marital status Single Single 33 Married 61	>35	6
25-30 24 30-35 5 >35 11 Marital status Single Single 33 Married 61	Non-exercising women	
30-35 5 >35 11 Marital status Single 33 Married 61	≤25	60
>35 11 Marital status	25-30	24
Marital status33Single61	30-35	5
Single 33 Married 61	>35	11
Married 61	Marital status	
	Single	33
Widowed 6	Married	61
	Widowed	6

Table 2. Participants' perceptions of the health benefits of exercise (N=400).

	I agree	I disagree
	%	%
"Exercise has physical health-related benefits"	95	5
Exercising strengthens the muscles and bones of the body.	93	7
Regular physical activity lowers the risk of cardiovascular disease.	90	10
Weight loss is made possible via physical activity.	45	55
"Exercise has psychological health-related benefits"	91	9
Exercise improves self-esteem	81	19
Getting some exercise may help you deal with stress.	60	40
Exercise improves well-being	80	20
"Exercise has social health-related benefits"	91	9
Participating in physical activity opens up opportunities for socializing.	72	28
New acquaintances are formed via physical activity.	60	40
Participating in physical activity makes it much easier to integrate into social situations.	94	6

Table 3. Benefits of exercise seen by women who exercise irregularly and by women who do not exercise at all.

	exercising		non-exerc	cising
	Agree	Disagree	Agree	Disagree
	%	%	%	%
"Exercise has physical health-related benefits"	98	2	95	5
Exercising strengthens the muscles and bones of the body.	91	9	92	8
Regular physical activity lowers the risk of cardiovascular disease.	91	9	89	11
Weight loss is made possible via physical activity.	61	39	41	59
"Exercise has psychological health-related ben"	93	7	90	10
Self-esteem soars when you do some exercise.	89	11	82	18
Getting some exercise may help you deal with stress.	74	26	64	36
The benefits of physical activity extend to mental and emotional health as well.	88	12	87	13
"Exercise has social health-related benefits"	88	12	93	7
Participating in physical activity opens up opportunities for socializing.	61	19	63	37
New acquaintances are formed via physical activity.	55	45	65	35
It's simple to fit in when you're active.	89	11	90	10

Health benefits of exercise; positive effect on self-esteem outshined the other psychological benefits (Table 3). Among social health benefits, a facilitative effect of exercise on adaptation to the social environment was more meaningful (Table 3). Subheadings were used to evaluate the advantages of each category. Musculoskeletal health was the most improved in two different groups of women

who took part in the study (Table 3). When it comes to psychology, Perceived exercise obstacles were also rated from greatest to lowest based on participant responses. Environmental obstacles were first (59%), personal barriers were second (13%), and timelessness was third (9%). (Table 4). As before, environmental obstacles emerged again and time again during group evaluations (Table 5).

Between the two groups, "high expense of exercise" was the top-rated environmental barrier (Table 5). Individuals who engage in irregular exercise have a strong belief that "performing exercise is exhausting activity" (3%) Despite this, the non-exercising group's top personal barrier was

"doing exercise a dull activity" (Table 5). Contrary to popular belief, the most significant source of timelessness was a preference for non-exercise leisure activities such as watching TV or going to the movies (Table 5).

Table 4. all participants' perceptions of obstacles to physical activity.

	Agree	Disagree	
	%	%	
"I do not do exercise because of environmental barriers"	19	81	
Exercising has a high monetary cost.	9	91	
There is a dearth of information available about exercise.	11	89	
No one in my family or circle of acquaintances encourages me to be in shape.	6	94	
"I do not do exercise because of personal barriers"	12	88	
I despise working out since it is monotonous for me.	8	92	
Exercise has the potential to result in an injury.	7	93	
Working out wears me out.	9	91	
"I do not do exercise because of timelessness"	8	92	
Exercising requires a lot of time away from my family commitments.	5	95	
Exercising takes too much of my time away from my professional obligations.	5	95	
When I have free time, I would rather watch TV or go to the movies.	7	93	

Table 5. Women who exercise irregularly vs women who don't exercise because of perceived obstacles to exercise.

	exercising	exercising		ising
	Agree	Disagree	Agree	Disagree
	%	%	%	%
For health reasons, I'm not a regular exerciser.	8	92	21	79
Exercising has a high monetary cost.	3	97	12	88
There is a dearth of information available about exercise.	5	95	8	92
No one in my family or circle of acquaintances encourages me to work out.	5	95	7	93
Due to health reasons, I am unable to engage in any physical activity.	6	94	19	81
I despise working out since it is monotonous for me.	4	96	10	90
Exercise has the potential to result in an injury.	3	97	9	91
Working out wears me out.	7	93	12	88
Because it takes up too much of my time, I seldom perform any physical activity.	3	97	11	89
Ex. requires too much of my time away from my family or friends.	4	96	5	95
Ex. takes up too much of my work-related time, and in my spare time, I'd rather engage in other social activities.	1	99	7	93
For health reasons, I'm not a regular exerciser.	2	98	8	82

DISCUSSION

Regular physical exercise is an important part of living a healthy lifestyle. 1,2 Although most adult women know the benefits of regular physical exercise, more than 60% don't. 19 Studies show that women who don't exercise have a 40% greater risk of cardiovascular disease than those who do. ²⁰ In terms of mortality, recurrence, and hospitalization, cardiovascular disease affects women three times as often as it does men. 21 22 A person's value is influenced by their perception of the benefits of physical exercise. It will be much easier to establish a regular exercise program if someone can see the advantages. When it comes to perceived difficulties, what matters are the perceptions of the obstacles that stand in the way of beginning an exercise program. Many individuals do not meet the required levels of physical exercise because the advantages are undervalued and the barriers to doing so are excessive. Identifying the benefits and barriers to physical activity is the first step in encouraging women to live a healthy lifestyle After that, a solution to the problems will haveto be identified. Regular physical activity improves musculoskeletal health by increasing muscle mass, strength, power, and endurance. 1,2,20 The benefits of physical activity extend to improving one's mental health as

well. In addition to improving mental and physical health, an active lifestyle also has a positive impact on sleeping patterns. Exercising reduces stress, lifts one's spirits, and improves one's mood. ²⁴⁻²⁷ It's simpler to interact with people when you're physically active as well as sociable behavior is improved. 28,29 Research on the health benefits of physical activity for women came up with a variety of results. There is evidence to suggest that younger women have higher quality of life, increased feeling of well-being, and improved physical fitness as well as improved mental health. The benefits of becoming older were discussed by women in their 60s and 70s. 17,23 In a major study, participants from each of the EU's 15 member nations were asked to rate the perceived benefits and drawbacks of regular physical activity. Women benefited the most from good health, stress relief, and physical activity, according to the study's results. Only a small percentage of the participants thought that the exercise would improve their social skills. 23 According to Lovell and colleagues' findings, physical exercise has both benefits and drawbacks for female university students in the UK. According to the results of the assessment, psychological contribution and prevention of health were not significant, despite social interaction being the least essential benefit.

¹⁶ Many Mosulian women, according to our findings, are aware of the many physical, psychological, and social advantages of engaging in regular exercise. Some evidence suggests that higher education may increase people's awareness of the health benefits of physical exercise. 30 Most participants are not regular exercisers, but a high level of education may explain for 90% of awareness of the benefits of exercise; 56% are irregular exercisers and 50% are non-exercisers have both graduated from university. Only 43% of non-exercising Mosulian women and 59% of occasionally exercising Mosulian women thought that exercise helps control weight and prevents obesity, which is an interesting finding. According to the authors' findings, previous studies have connected women's overall physical activity goals to changes in body shape and weight loss. 31-33 Obesity, according to our findings, was defined as a BMI of 25 kg/m2 or above. The results were the same whether the ladies exercised or not (41 percent and 36 percent). Another way of putting it is that obesity may not be a problem for Mosulian women since they do not appreciate the benefits of exercise in managing their weight. Exercise's psychological health benefits were most highly ranked for improving one's self-esteem and selfconfidence. If you want to live a happy and fulfilled life, you need have strong self-esteem. Athlete self-esteem has been shown to be correlated with traits including athletic ability, physical fitness, positive body image, and strength. 34 It's great to see Mosulian ladies getting more into physical exercise on a daily basis¹³. According to our study, our sample's awareness of the social benefits of exercise was on par with its physical and psychological benefits. Exercise improves social conformity, according to the majority of those who ticked the option. Mosulian women's attitudes about physical activity and the benefits it provides socially and psychologically have been shown to be consistent. An increase in one's sense of self-worth will help in social integration. Keeping a regular workout routine is difficult for women for a variety of reasons. 35,36 Age, marital status, socioeconomic situation, and educational level are some of the most important demographic variables that affect physical activity. A lower degree of physical activity was often linked with being married and having a lower income or education. 37-39 Life milestones including leaving home, starting a job, getting married/de facto, and having a mother, however, are more barriers to physical activity were more common among younger women than older women, 40-year-olds were more likely than 40-year-olds to be elderly or in bad health. 17,23 Physical activity's perceived benefits were the same across all groups, although women who never exercised scored higher than those who exercised infrequently. Even if the outcomes were anticipated, they were noteworthy none the less. These findings aided in elucidating the significance of a few major obstacles. Examining all participants' perspectives on physical activity obstacles revealed that neither personal nor environmental constraints were important in encouraging physical activity participation. Even the most important challenge, the environment, accounted for just 15.9% of the total. As a consequence, failing to gauge how fit the general population is for exercise may be a problem. Exercise was identified as the

most difficult barrier to overcome by non-exerciser women, followed closely by financial ones. Mosulian women may benefit from the implementation of policies that reduce the cost of exercising and make exercise facilities more readily available. A lack of time imposed by personal and family responsibilities is the most common physical activity barrier for women, according to research. 5,23,35,36,41 In the European Union Study, women's work and educational responsibilities were the biggest barriers to improving their physical activity. In the United States, a study of 4140 individuals showed that inadequate physical activity was mainly attributable to a lack of time and motivation for 39% of women. 5 When it comes to physical exercise, few Japanese women participate because of the time commitments involved with job and family life. 41 Contrary to common perception, timelessness does not seem to be a major barrier for Mosulian non-exercising women. Due to family and work obligations, involvement is low. However, these factors aren't regarded as barriers to physical activity. Because it demonstrates that Mosulian women have no idea how to engage in modern-day sports and fitness, this result should be emphasized. Women who felt their current level of activity was inadequate mentioned a lack of free time as a significant fitness barrier. 5 To compare the results of the study on the barriers, researchers utilized data from a recent study that included Mosulian women. Caregiving for a loved one, not having enough time to exercise due of family and work obligations, as well as a lack of financial resources, were cited as significant obstacles13.

They all identified high exercise expenses as the most important environmental barrier preventing them from becoming physically active. The results of other studies differ greatly from our own. When compared to previous studies, our study found that most women did not participate in regular physical activity at least twice a week. There may be a reason for the uneven distribution of challenges. The hurdles that an individual perceives as standing between him/her and a new exercise habit are known as personal assessments of those obstacles. Due to low perceived benefits and high perceived obstacles to physical activity, many people do not get the recommended amount of physical activity. The first step to promoting a healthy lifestyle among women is to identify the advantages and obstacles to physical exercise. After then, a solution to the obstacles should be found. 23 Participating in regular physical exercise helps enhance musculoskeletal health by boosting muscular mass, strength, power, and endurance. 1,2,20 In addition to physical well-being, exercise has been shown to enhance psychological well-being. Active living improves mental and physical health as well as sleep habits. Exercising lowers stress levels, alleviates sadness, and boosts one's self-esteem. ²⁴⁻²⁷ Other social advantages of exercise include altering one's lifestyle, making it easier to connect with others, and promoting sociability. ^{28,29} Different findings were found in research looking at the health advantages of physical exercise for women. Studies have shown that younger women report advantages such as enhanced emotions of well-being and general health promotion, while older women report benefits linked to the aging process such as life improvement and better physical fitness. 17,23 A large research looked at the perceived

advantages and disadvantages of physical exercise among a representative sample from each of the EU's 15 member states. When the study's findings were analyzed, women saw the most advantage from maintaining excellent health, releasing stress, and becoming active. Only a few women believed that the workout would help them connect with others. 23 The research by Lovell and colleagues looked at the advantages and obstacles of physical activity among female university students in the United Kingdom. Psychological contribution and preventive health were not substantial according to the findings of the evaluation, although social contact was the least important advantage. 16According to the results of our research, many Mosulian women are aware of the many benefits of regular exercise on their physical, psychological, and social health. Higher education, according to some research, may raise people's knowledge of the health advantages of physical activity. 30 Despite the fact that the majority of participants aren't regular exercisers, a high level of education may account for 90% of participants' knowledge of the advantages of exercise; 56% of irregular exercisers and 50% of nonexercisers both graduated from university. One intriguing result relates to the physical health advantages of exercise: just 43% of non-exercising Mosulian women and 59% of irregularly exercising Mosulian women believed that exercise helps manage weight and avoids obesity. Women's general physical activity objectives have been linked to body shape and weight reduction in prior research, according to the authors. 31-33 According to our research, obesity was defined as a body mass index (BMI) of 25 kg/m2 or above. This was true for women who exercised and for those who did not (41 percent and 36 percent). To put it another way, it's possible that obesity isn't an issue for Mosulian women since they placed little value on the weight-controlling effects of exercise. Positive effects on self-confidence were the most highly rated exercise psychological health benefit. The secret to a fulfilling and happy life may be found in having a high sense of self-worth. Sport skill, physical condition, body image, and strength are all components of exercise that have been linked to higher levels of self-esteem. 34 It is encouraging to see that regular physical activity has grown more popular among Mosulian women in the last few years¹³. Our sample's knowledge of the social advantages of exercise was found to be on par with that of the benefits to physical and psychological well-being. A greater number of people checked out the box next to "exercise promotes conformity with the social environment." It was shown that Mosulian women's views on physical exercise and its social and psychological advantages are consistent. Increasing one's self-worth will aid in the adjustment to social situations. Women have been found to face a number of roadblocks when it comes to maintaining a regular physical schedule. 35,36 Among the most basic demographic factors that influence physical activity, there is age, marital status, socioeconomic position, and education level. In most cultures, being married and having a lower income or education level were associated with lower levels of physical exercise. 37-39 There are also some life events that have a greater impact on physical activity in younger women than in older women⁴⁰, such as moving away from home and starting work as well as getting

married or de facto and becoming mothers, whereas barriers related to aging and having poor personal health were more important for older women. 17,23 The perceived advantages of physical exercise were the same for all groups, however the non-exercising women had higher rankings than the irregularly exercising women. The results were expected, but nonetheless significant. These results helped to clarify the importance of a few roadblocks. A unexpected finding came from evaluating all participants' views of the barriers to physical exercise, which showed that neither environmental nor personal nor timelessness limitations were significant in physical activity participation. Even the most significant obstacle, the environment, only accounted for 15.9% of the total. As a result, not assessing our population's preparedness to exercise may be an issue. However, among non-exerciser women, "exercise is an expensive activity" was the most frequent obstacle cited in addition to environmental ones. The development of measures such as lowering the expense of exercise and making exercise places more easily accessible may, in our view, aid Mosulian women in establishing regular exercise habits. Studies on women have shown that the most prevalent physical activity obstacle is a lack of time due to personal and family obligations. 5,23,35,36,41 Women's job and education obligations were the most significant obstacles to increasing physical activity in the European Union Study. 23 a survey of 4140 people and 39% of women in the United States found that insufficient physical exercise was mostly due to a lack of time and desire. 5 According to a research conducted by Nishida and colleagues, few Japanese women engage in physical activity due to time constraints associated with work and family obligations. 41 In Mosulian non-exercising women, timelessness does not seem to be a significant obstacle, contrary to popular belief. Low involvement percentages in family or job obligations were not deemed to be physical activity obstacles. This finding should be highlighted since it shows that Mosulian women have no clue how much fun it is to participate in sports and physical activity. Lack of free time was cited as a major exercise barrier by women who believed their current amount of exercise was inadequate.5 A recent research that included Mosulian women was used to compare the study's findings on the obstacles. Only similarity is related to the fact that the high cost of physical activity was the most notable environmental physical activity barrier among our participants, with caregiver responsibilities, lack of time due to family and work obligations, and economic difficulties such as access to exercise facilities being major barriers. 13 Other researchers' findings vary significantly from ours. Despite the fact that all women in the other research engaged in physical exercise at least twice a week, the majority of women in our study did not have the habit of exercising. This fact may explain the discrepancy in the barriers found between the two groups.

CONCLUSION

According to the findings of this pilot research, Mosulian women's attitudes about exercising may be comprehended to some extent. Mosulian women are aware of the health advantages of physical activity and have few obstacles to participating in one. Despite these findings, they do not routinely exercise. The study's findings may not be

generalizable, but they may lead to the creation of methods that motivate Mosulian women to adopt active, healthy lifestyles. Comprehensive research with bigger samples will, no doubt, be required in the future.

REFERENCES

- Demirtaş N. Menapoz ve egzersiz. Fizyoter Rehabil. 1999;10:5-12.
- Teoman N, Özcan A, Acar B. Postmenapozal kadınlarda egzersizin fiziksel uygunluk düzeyi ve yaşam kalitesine etkisi. Fizyoter Rehabil. 2003;14:9-15
- WHO. Diet, nutrition and prevention of chronic heart diseases. WHO Technical Report Series 916. Geneva: World Health Organization; 2003.
- Yusuf H, Croft JB, Giles WH, et al. Leisure-time physical activity among older adults. Arch Intern Med 1996;156:1321-1326.
- Chinn DJ, White M, Harland J, et al. Barriers to physical activity and socioeconomic position: implications for health promotion. J Epidemiol Commun H. 1999;53:191-192.
- Heesch KC, Masse LC. Lack of time for physical activity: perception or reality for African American and Hispanic women? Women Health 2004;39:45-62.
- Scharff D, Homan S, Kreuter M, et al. Factors associated with physical activity in women across the lifespan: Implications for program development. Women Health 1999;29:115-133.
- Ince M, Ebem Z. Role of exercise stages in self- reported health promoting behaviors of a group of Turkish adolescents at transition to university. Percept Motor Skills. 2009;108:399-404.
- Cengiz C, Asçı FH, Ince ML. Egzersiz davranısları degisim basamakları anketi: Geçerlik ve güvenirlik çalısması. Türkiye Klinikleri Spor Bilimleri Dergisi, 2010;2:32-37.
- Turkish National Burden of Disease Study 2004. http://ekutuphane.sagem.gov.tr/kitaplar/turkey_bur den_of_disease_study.pdf.
- Brown WJ, Burton NW, Rowan PJ. Updating the Evidence on Physical Activity and Health in Women Am J Prev Med. 2007;33:404-411
- Henderson K, Bialeschki M. Women and the meanings of physical recreation. Women in Sport and Physical Activity Journal 1994;3:21-37.
- Koca C, Henderson KA, Asci FH, et al. Constraints to leisure time physical activity and negotiation strategies in Turkish women. J Leisure Res. 2009;41:225-251.
- Yıldırım G. Physical activity behaviors and neighborhood walkability perceptions of Turkish women in low and high socio-economic environments. http://etd.lib.metu.edu.tr/upload/ 12612446/index.pdf.
- Mosca L, Mochari H, Christian A, et al. National study of women's awareness, preventive action, and barriers to cardiovascular health. Circulation. 2006;113:525-534.
- Lovell GP., El Ansari W. and Parker JK. Perceived exercise benefits and barriers of non-exercisin female university students in the United Kingdom. Int J Environ Res Public Health. 2010;7:784-798.
- Booth ML, Bauman A, Owen N, et al. Physical activity preferences, preferred sources of assistance, and perceived barriers to increased activity among physically inactive Australians. Prev Med. 2002;26:131-137.
- Juarbe T, Turok XP. and Pérez-Stable EJ. Perceived benefits and barriers to physical activity among older Latina women. Western J Nurs Res. 2002;24:868-886.
- U.S. Department of Health and Human Services. Healthy People 2010: Understanding and improving health. Washington, DC: U.S. Government Printing Office; 2000.
- Centers for Disease Control and Prevention Web site, Physical activity and health. U.S. Department of Health and

- Human Services. Available at: www.cdc.gov/nccdphp/sgr/women.htm (Accessed April 24, 2008).
- Bello N, Mosca L. Epidemiology of coronary heart disease in women. Prog Cardiovasc Dis. 2004;46:287-295.
- Onat A, Dursunoğlu D, Sansoy V. Relatively high coronary death and event rates in Turkish women; Relation to three major risk factors in five year follow-up cohort. Int J Cardiol 1997;61:69-77.
- Zunft HJF, Friebe D, Seppelt B, et al. Perceived benefits and barriers to physical activity in a nationally representative sample in the European Union. Public Health Nutrition 1999;2(Suppl):153-160.
- 24. Brugman,T., & Ferguson,S. Physical exercise and improvements in mental health. J Gerontol Nurs, 2002;40(8):24-31.
- Penedo FJ, Dahn JR. Exercise and Well-Being: A Review of Mental and Physical Health Benefits Associated With Physical Activity. Curr Opin Psychiatry. 2005; 18(2):189-193.
- Hassmen P, Koivula N, Uutela A. Physical exercise and psychological well-being: A population study in Finland. Prev Med. 2000;30:17-25.
- Callaghan, P. Exercise: A neglected intervention in mental health care? J. Psychiatr. Ment. Health Nurs. 2004;11:476-483.
- Fletcher GF, Balady,G, Blair SN, et al. Statement on exercise: benefits and recommendations for physical activity programs for all Americans. Circulation. 1996;94:857-862.
- Trost SG, Pate RR, Dowda M, et al. Psychosocial correlates of physical activity in White and African- American girls. J Adolesc Health. 2002;31:226-233.
- Parks SE, Housemann RA, Brownson RC. Differential correlates of physical activity in urban and rural adults of various socioeconomic backgrounds in the United States. J Epid Comm Health. 2003;57:29-35.
- Segar ML, Eccles JS, Peck SC, et al. Midlife women's physical activity goals: sociocultural influences and effects on behavioral regulation. Sex Roles 2007;57:837-849.
- Strelan P, Mehaffey S, Tiggeman M. Self objectification and esteem in young women: The mediating role of reasons for exercise. Sex Roles 2003;48:89-95.
- Jackson-Elmoore C. Self-perceived weight status and exercise adequacy. Health Educ Res. 2007;22:588-598.
- Scully D, Kremer J, Meade MM, et al. Physical exercise and psychological well-being: A critical review. Br J Sports Med. 1998;32:111–20.
- Brady B, Nies MA. Health-promoting lifestyles: A comparison of older African American women above and below the poverty level. J. Holist. Nurs. 1999;17:197-207.
- Nies MA, Chrusical HL Neighborhood and physical activity outcomes in women: Regional comparisons. Nurs Clin North Am 2002;37:295- 301.
- Speck BJ, Harrell JS. Maintaining regular physical activity in women: evidence to date. J Cardiovasc Nurs. 2003;18:282-291.
- Macera CA, Croft JB, Brown DR, et al. Predictors of adopting leisure-time physical activity among a biracial community cohort. Am J Epidemiol. 1995;142:629-635.
- Sternfeld BS, Ainsworth BE, Quesenberry CP. Physical activity patterns in a diverse population of women. Prev Med. 1999;28:313-323.
- Devine CM, Bove CF, Olson CM. Continuity and change in women's weight orientations and lifestyle practices through pregnancy and the postpartum period: the influence of life course trajectories and transitional events. Soc Sci Med. 2000;50:567-582.
- Nishida Y, Suzuki H, Wang DH, et al. Psychological determinants of physical activity in Japanese female employees. J Occup Health. 2003;45:15-22.