COMPLEMENTARY THERAPIES FOR WOMEN WITH BODY IMAGE ISSUES

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Abstract

Body image disorders involve dissatisfaction with a specific part or all of a woman’s body. A woman experiencing body image dissatisfaction may face psychological problems such as mood disorder, decreased self-esteem, and decreased physical activity. With the reflection of the weak-ideal woman’s appearance by society and mass media, women may be exposed to these problems and can internalize this by comparing their bodies with the idealized women’s bodies. Women may experience major hormonal changes due to pregnancy and menopause that affect their physical appearance, roles, and responsibilities in society and family, and breast and gynecological cancers. Alternative therapeutic methods for body image disorders are important for women. Physical activity and exercise, yoga, dance therapy, body awareness therapy, and manual therapy can all be recommended for women to improve body image.

Keywords: body image disorder; women health; complementary therapies.


Introduction

The body shape of a person, anthropometric measurements, and body contours build up a unique figure [1]. On this figure, how we think, perceive, and feel about a certain part or whole of the body and the behaviors we create as a result represent the body image, which consists of cognitive, perceptual, affective, and behavioral components. Thoughts and beliefs about the body make up the cognitive component, how people perceive the shape of their body or body parts constitute the perceptual component, and how they feel about their body, and the actions they take about their bodies as a result of all these constitute the behavioral component [2]. All these components have a dynamic structure because they are personal and might change according to subjective, personal, and environmental conditions [3].

Body image may be positive or negative [4]. Negative body image may result in behaviors such as dissatisfaction with the body or certain parts of the body, being preoccupied with appearance, spending time in front of the mirror frequently, and isolating oneself from society [1]. These behaviors affect physical and psychological health and can result in decreased self-esteem, mood disorder,
depression, impaired competence, decreased social and occupational functioning, sexual dysfunctions, and disrupted eating behaviors [5].

Negative body image is common in men and women of all ages [5]. However, although body image dissatisfaction is more common in women compared to men, it can be experienced in every period of life [6]. Body Mass Index (BMI) being much above or below normal [7], pregnancy [8] in women, rapid change in BMI during the menopausal period [9], shifting away from the ideal female appearance standardized by society during pregnancy [10], the increased body mass index for the first time and a very different body shape from the pre-pregnancy period [11], the increase in body fat rate with menopause and aging and its spread towards the waist-hip circumference, decrease in muscle mass, enlargement of the breasts, significant changes in body shape, skin color changes, decrease in skin elasticity and formation of wrinkles, the incidence of breast and gynecological cancers in female gender [12], and serious side effects associated with physical appearances such as breast loss and alopecia because of treatment methods applied to women with cancer [13] are important factors in the formation of negative body image in women. In addition to all these, women are constantly exposed to the appearance of thin, athletic, curvy women idealized by society with the increasing use of media tools and image-based social media accounts [14]. Also, because of women’s roles such as being businesswomen, being a partner or a wife, or a mother throughout their lives, their life priorities may change, and the time they spend on personal care may decrease because of various obligations. All these personal and environmental factors may cause many psychosocial and behavioral disorders, especially body image disorder and low self-esteem [12].

Being satisfied with body image is associated with long-term mental health, well-being, and quality of life [2]. For this reason, considering the psychological problems and unhealthy behaviors of people who have negative body image, many interventions are used to improve body image such as pharmacologic methods, cognitive behavioral therapy, fitness training, physical activity methods [15], media literacy, self-esteem enhancement, and psychoeducational techniques. [16]. In summary, many physical, environmental, and psychosocial factors may cause negative body image perception in women.

Sociocultural and Biological Factors in Women with Body Image Disorder

Body Weight

Body weight is among the main determinants of female body image. Individuals who suffer from overweight or obesity in society and women who try to lose weight despite being underweight, progressing towards anorexia nervosa, have different behavioral problems because of body dissatisfaction [7]. Obesity, which is characterized by excessive accumulation of body fat, causes significant changes in the body size of individuals. It causes decreased mobility, motor difficulties, and reduced quality of life. Individuals may have negative attitudes and feelings toward their bodies with a high level of body dissatisfaction. Tagini et al. [17] reported that obese individuals make less accurate predictions of body size compared to healthy individuals. Weinberger et al. [18] reported that obese individuals experience higher body dissatisfaction compared to those who have normal weight, and women experience this problem more. On the other hand, individuals who suffer from anorexia nervosa exhibit intense fear of gaining weight, food restrictions to prevent weight gain, and dissatisfaction with body weight and shape [19]. Individuals who have both disorders show decreased self-esteem, increased anxiety about appearance, social isolation, and eating behavior disorders [20,21].

Pregnancy and Postpartum Period

The pregnancy period, which expresses the transition of women to motherhood, causes rapid physical changes in body weight specific to the trimester. Sudden body changes, which are usually different from pre-pregnancy and where weight gain is expected for the first time, may cause dissatisfaction with body image [8,11]. Hodgkinson et al. [11] reported that women maintain their body image satisfaction during pregnancy by distinguishing between obesity and pregnancy and being aware of the natural processes brought by motherhood, but they have the desire to regain their previous bodies in the postpartum period by combining the role of mother with their previous wife, partner or businesswoman roles, which cause that they may experience body image dissatisfaction. Gonzalez et al. [22] found that the most common symptoms were depression, anxiety, and body dissatisfaction during pregnancy and the postpartum period, and body dissatisfaction 6 months after birth was associated with depression. Similarly, Hartley et al. [23] also reported that postpartum poor body image is associated with depressive symptoms.
Menopausal Period and Aging

The menopausal period is an important health determinant in women, in which extensive hormonal changes begin with the end of fertility and affect women’s middle age and future life [9]. Hormonal changes begin approximately 5 years before the last menstrual period and continue for years following the onset of menopause. One-third of women’s lives are spent in the postmenopausal period because the mean age at menopause ranges from 46 to 52 [24]. In addition to hot flashes, night sweats, vaginal/urinary symptoms, sexual dysfunctions that begin with menopause, and biological, psychological, behavioral, and social changes that go far beyond reproduction occur [25]. The serum Follicle Stimulating Hormone (FSH) concentration increases with the menopausal transition phase and the estradiol concentration decreases. Especially with the decreased estrogen hormone, decrease in bone formation and increase in destruction, and decrease in bone mineral density lead to bone loss. Also, the risk of sarcopenia and osteoporosis increases with decreased muscle mass and increased fat mass with the effect of hormonal changes [24]. Estradiol levels fall to a level close to zero with menopause and aging and estrogen deficiency also affects skin health. Decreased collagen, elastin, and fibroblast function together with skin atrophy, dryness, and wrinkle formation, impaired wound healing, and barrier function result in decreased antioxidant capacity and increase the perception of aging in women [26]. Systemic problems such as vasomotor disorders, cardiovascular problems, sleep problems, sexual dysfunctions, musculoskeletal problems, increased hip-waist circumference with increased body fat, physical appearance problems such as breast enlargement, nervousness, mood disorders, anxiety, stress, psychosocial symptoms such as low self-esteem and cognitive effects are also observed. These symptoms brought by menopause cause body image disorders in women [27]. In a longitudinal study conducted with 75,256 postmenopausal women, Ginseberg et al. showed that dissatisfaction with body image was 83% common [28]. In their study conducted with 300 postmenopausal women aged 45-65 years, Nazarpour et al. [29] found that the severity of menopausal symptoms was associated with body image disorder. Also, body changes and body dissatisfaction in the menopausal period seem to result in worsening quality of life [30], sexual satisfaction problems [31], and eating disorders [32].

Oncological Problems

Breast cancer is the most frequently diagnosed cancer in women and the leading cause of cancer-related mortality in women on a global scale [33]. Also, gynecological cancers, including cancers of the cervix, fallopian tubes, ovaries, uterus, vagina, and vulva, constitute major global health burdens in women [34]. Despite increasing awareness of breast cancer and advances in screening methods, most women are diagnosed when it becomes invasive [33]. In such a case, the health conditions that develop secondarily to the disease remain in the background because the focus is primarily on the struggle for life and health. However, surgery, chemotherapy, radiotherapy, and hormone treatment applied in the treatment of breast cancer cause many changes in the body that patients have to cope with [13]. Side effects associated with physical appearance, such as loss or difference in the breast, scarring, alopecia, weight gain or imbalance, and muscle loss cause the development of body image disorder and appear as an issue that must not be overlooked [35]. Guedes et al. [36] reported that 74.8% of women who applied for breast cancer treatment had body image dissatisfaction. Along with these changes, patients also show symptoms such as decreased quality of life, severe pain, fear of relapse, fatigue, depression, decreased femininity, and attractiveness, changes in sexuality, and decreased self-esteem [37].

Mastectomy is among the most common treatments for breast cancer and is perceived by patients as an amputation, with its challenging results. Loss of symmetry and obvious changes in physical appearance with unilateral or bilateral mastectomy surgery causes deterioration in the body image of individuals [38]. Phoosuwan et al. [39] reported that women who underwent mastectomy due to breast cancer experienced body image impairment and this was associated with quality of life. Sun et al. [40], on the other hand, reported that women who lost one breast and survived breast cancer struggle to cope with the image of women defined by society after the change in self and body image caused by the deformity in their bodies.

Similarly, medical treatment of gynecological cancers might also affect body parts associated with femininity and cause changes in body image. The uterus and ovaries, along with the breast, are seen as symbols of femininity, fertility, and motherhood in many cultures. Aquil et al. [41] reported that women who had gynecological cancer had decreased self-image and self-esteem following surgery and these were predictive factors for sleep quality deterioration. Women have to cope with various side effects after surgery, radiotherapy, or chemotherapy due to gynecological cancer. Significant changes such as hair loss, infertility, early menopause, weight gain, and genital deformity cause physical and emotional traumas.
and result in negative body image in women [42].

Social Comparisons and Thin-Ideal Internalization

Women’s perceptions of their self-worth are associated with their body weight, body shape, and appearance [43]. In today’s world, where digital technologies and internet devices are an integral part of our lives and media consumption increases considerably, media expose women to perceptions of beauty that are difficult to obtain [44]. Although thin, white-skinned, flat-bellied, thin-waisted female physical images are dominant, the idealization of curvy and athletic female body images results in body dissatisfaction in women [10,43]. In a meta-analysis that involved women who were aged 10-46 years, Mingoia et al. [44] found that there was a small-to-moderate relationship between the frequency of use of social networks and ideal body internalization, but, the use of appearance-related characteristics in social networks was also strongly associated with the internalization of thin ideal image. Also, “fat speech” and sociocultural pressure, which is made in society and supports the thin ideal, result in negative body image symptoms such as low body esteem, body dissatisfaction, and the urge to be thinner [45].

Complementary Therapy Methods with Body Image Problems

Yoga-Meditation

Yoga practice includes physical postures, focus on the breath, mental awareness, and meditation [46], and focuses on developing a positive relationship with one’s body [47]. The underlying principles of yoga are the promotion of movement, enhanced body awareness, and self-compassion in line with the needs of one’s current body. In this way, it is considered that yoga may help to create greater body satisfaction [48].

A large population-based study conducted with women in Australia found that yoga/meditation was associated with body satisfaction in women who were not overweight, but not in obese women [49]. Neumark et al. [50] reported that doing yoga for at least 30 minutes a week had positive effects on body image concerning body satisfaction level and Body Mass Index in their study that was conducted with young adults. However, individuals who had lower body image were found to have higher effects.

In a randomized controlled study conducted with women with body image problems because of eating disorders, McIver et al. [51] included an additional 60-minute weekly yoga session and a daily 30-minute home yoga program (movement, stillness, breath awareness, and meditation) in the intervention group while applying dietary adjustments in both groups. Also, all participants were advised to stay away from distractions such as television when they ate. As a result of yoga practice, uncontrolled eating behaviors decreased and small but statistically significant improvements in Body Mass Index were detected in the yoga group. In a study conducted with 67 patients with anorexia, bulimia nervosa, and other eating disorders, body image was evaluated with a self-report questionnaire after 8 weeks of therapeutic yoga intervention administered concurrently with ambulatory eating disorder treatment. Yoga practitioners reported that their self-acceptance, self-awareness, confidence, and emotional and physical strengths improved, and they felt relaxed [52].

Another study that included 92 women examined the relationship between participation in different yoga classes and different aspects of body image. Yoga tutorials are categorized by how much yoga emphasizes the “mind” aspects (meditation, breath, awareness, and belief) and the “body” aspects (positions, fitness). It was understood that those who participated in yoga classes that put more emphasis on the mind had greater body awareness and satisfaction. However, no significant difference was detected in behavioral changes associated with eating disorders in both yoga training [53].

Abbott et al. [54] reported that exposure to images of idealized models with physical competence can be detrimental to one’s body image and these individuals may feel worse about their bodies when they make comparisons with the instructor or other students whom they perceive as more flexible, stronger, or thinner than they are when practicing a yoga class. The messages given in yoga classes should generally focus on aspects of improving the functionality of the body rather than focusing on appearance. Instructors are also advised to use language to help individuals appreciate their bodies, avoid any discourse that might encourage comparison among students, not use expressions that encourage a particular body type, and be careful when discussing eating patterns such as detoxification and diet [55]. However, practicing yoga in a non-mirrored room may result in reduced social and physical anxiety when compared to practicing in a mirrored room [55,56].

In another study that was conducted in Australia, 193 yoga practitioner women and 127 women who had not practiced yoga before were asked for their opinions on positive body image, self-objectification, and desire for refinement.
It was found that yoga practitioners scored higher on positive body image and scored lower on self-objectification than non-yoga participants. It was concluded that yoga practices were an embodied activity that could provide women with the opportunity to develop a positive relationship with their bodies [47]. In one of the studies conducted with female yoga practitioners, participants reported comments on how yoga helped with their body image, their ability to reconnect with their bodies and self-acceptance. In these comments, the participants mentioned that yoga helped to cope with body image problems, they described their body as a void they lived in before but they now felt like a home, and they reached a high level of physical acceptance [56].

In general, yoga increases the mind-body agreement in women who have problems with their body image. It helps them move away from their body concerns and establish more positive relationships with their bodies. Previous studies show that yoga has controversial results regarding Body Mass Index in individuals who have eating disorders. However, positive psychological results associated with individuals’ acceptance of their bodies and body satisfaction were reported definitively. The approach of yoga instructors to their participants, the language they use, and the mental messages they convey help to make positive contributions to body image.

Dance Therapy

Dance Movement Therapy (DMT) is a bodily-based approach to exploring and using movement therapeutically with a focus on self-awareness to promote individuals’ psychophysical integrity [57]. This psychodynamic model forms part of creative art therapies, including music, art, and drama therapy [58]. Some of the main characteristics of dance therapy are providing a chance for active participation, an opportunity for self-expression, a focus on imagination, and a mind-body connection [57].

Studies are reporting that professional dances such as gymnastics, ballet, classical and modern dance weaken body image. Such aesthetic dance activities rely heavily on appearance and expression. Factors such as body appreciation anxiety and competition often cause eating disorders and body image problems in professional dancers. However, if these activities are performed in non-competitive settings, less focus may be placed on aesthetics and appearance [59-61].

Types of dance that are not practiced at a professional level focus on the functionality of the body instead of appearance [62]. The focus is on perceiving what the individual’s body can do rather than how it looks and is perceived by others [63]. In this context, it is considered that the application of non-professional dance types for therapeutic purposes and avoiding competition may benefit the development of body image. Meekums et al. [64] reported in their study that dance therapy improved body image and self-esteem and reduced psychological distress in obese women because of emotional eating. In a randomized controlled trial conducted with 12 women who were receiving treatment for eating disorders, dance therapy that lasted 90 minutes (1/12 weeks per week) improved body satisfaction and appearance. Women who received dance therapy reported improved mood and increased self-awareness scores [57].

In a randomized controlled study that was conducted with 74 women who were receiving hormone treatment for breast cancer, the effects of mat Pilates and belly dance (60 min/3 times a week) on body image, self-esteem, and sexual function were examined over 4 months. Although body image improved in the short and long term in the belly dance group, body image improvement was observed only in the Pilates group in the long term, and body image decreased significantly in the control group in the long term. Belly dance appears to be effective in improving body image and sexual disturbances in the short term for those who receive breast cancer treatment [65].

Psychological effects associated with increased fat mass, body composition disorder, signs of aging, and body image can be seen in the postmenopausal period. The effects of dance therapy on body composition (body fat and lean mass), blood lipids, functional fitness, self-image, and self-esteem in postmenopausal women were also investigated in previous studies. A total of 90 min (3/16 weeks) of dance therapy produced significant improvements in lipid profile, functional fitness, self-image, and self-esteem [66].

Muller et al. [67] investigated the effects of 36-week dance therapy in 18 obese women. After warming up, relaxation, breathing exercises, and improvised dance movements, women reported that they discovered and welcomed the feelings, memories, emotions, and mental representations that emerged regarding their body perceptions. Improvements in body consciousness and mental representations associated with body image were reported independently of unvarying body weight. Dance therapy can be important in that it enables obese people to develop their body awareness,
self-body image, and mental representation. In a cross-over study conducted with 50 adolescent female students, the effects of a physical education program that consisted of aerobic dance (50 min/twice a week) and swimming activity (50 min/twice a week) on body image dissatisfaction and physical self-perceptions were investigated and it was reported that participation in 6 weeks of aerobic dance significantly reduced body image dissatisfaction and improved physical self-perceptions, but these developments could not be sustained. It is considered that the participants might have felt more physically active in aerobic dance and showed more effort and motivation to expend energy for weight loss when compared to swimming activity [68].

For dance therapy to positively affect body image, it can be recommended to be applied for therapeutic purposes away from physical concerns, appreciation, and competition. Dance therapy showed superior effects in terms of body image development when compared to standard methods or different treatments under various conditions. These results might have occurred because dance therapy offers the opportunity to express feelings and thoughts through music and movement. Previous studies also show that dance therapy makes positive contributions to people’s mood and psychology, body satisfaction, and self-awareness.

In dance therapy, the effort and various movements can contribute to body composition development. Aerobic dance types can reduce the body image concerns of obese individuals by providing significant effects on increasing physical fitness. Various studies report that the effects of dance therapy do not last long. Adding dance activity to the routines of individuals with the potential to have problems with body image may have positive effects on their quality of life [65,68].

Body-Awareness Therapies

The postural vertical line is important for sensing body orientation in space, and maintaining and maintaining upright posture and gait [69]. Basic Body Awareness Therapy (BBAT) is a physiotherapeutic approach aiming to improve bodily awareness, movement quality, posture, coordination, balance, postural control, and physical-social functions by integrating slow movements and awareness of the postural vertical line with breathing [70].

Body awareness therapies involve movements associated with daily activities such as lying, sitting, standing, and walking. Individuals are instructed to concentrate on the vertical line of the body. All movements start from the center of the body. In this way, sensorimotor awareness and stability in the centerline of the body are increased [70]. Focusing on kinematic chains and making the sequence of movements conscious is one of the bodily awareness methods used to stimulate the mind-body connection, reach awareness about the self, or develop sensory-motor connections [71].

The Feldenkrais Method, which is frequently preferred among body awareness therapies, is defined as a movement-based somatic training method [72]. The logic of the method is based on the assumption that functionality is provided by increasing awareness of the body with movement, improving movement efficiency during daily activity, and reshaping habitual wrong movements [73].

The effects of the Feldenkrais Method on body satisfaction, body composition, body image, and emotional changes were investigated in a randomized controlled study with 30 eating disorder patients. The 15 participants who took the 9-hour “Feldenkrais-Awareness Through Movement” course showed increased satisfaction with their body’s problem areas and their health, as well as with acceptance and familiarity with their own body, unlike the control group. It was also observed that they showed self-confident behaviors, their feelings of helplessness decreased, and their desire to return to child safety decreased. These feelings of the participants indicate the development of a sense of self, self-confidence, and a general maturation of personality [74].

Yagci et al. [75] investigated the effects of Basic Body Awareness Therapy (BBAT) on the Degree of Scoliosis Curvature (Cobb’s Angle), trunk asymmetry, cosmetic deformity, and quality of life in 20 women who were diagnosed with adolescent idiopathic scoliosis. As a result of BBAT in which body awareness and basic exercises were used, improvement was detected in Thoracic Cobb Angle, cosmetic deformity, and body asymmetry. The fact that body awareness exercises provide improvement in cosmetic problems and body asymmetry because of scoliosis may increase body satisfaction and reduce body image concerns of women.

The effects of 8-week interactive training sessions, cognitive behavioral therapy, and mindfulness-based exercise approaches on body image were investigated in a study that was conducted with 110 female students in Lithuania. The exercise contents were designed to make individuals use their own body weights, yoga/Pilates exercises combined with rhythmic breathing, balance exercises emphasizing functional
movements, and complex exercises involving more than one muscle group. The training sessions and mindfulness-based exercise program showed significant improvements in positive body image, reduction in negative body image, and reduced internalization of sociocultural stereotyped ideals. Also, Body Mass Index decreased in the intervention group [76].

Body awareness exercises are distinguished from other types of physical activity because they are based on the functionality, smoothness, and awareness of the body, and the mind-body association. Previous studies show that bodily awareness exercises are effective in eliminating many problems such as body image, body satisfaction, self-perception, self-confidence, and eating disorders. It can be argued that bodily awareness exercises are an ideal method for the development of body image because it is based on the functionality, quality of movement, postural awareness, and smoothness of individuals. However, it must be noted that there are few studies directly examining the effects of body awareness exercises on body image in the literature.

Physical Activity and Exercise

Regular physical activity and exercise decrease the risk of chronic diseases and premature death [77]. Physical exercise helps to maintain a healthy lifestyle in women during pregnancy [78], menopausal period, and serious medical conditions such as cancer [79], which limit the negative effects that may occur on the body [80], and is a solution to musculoskeletal problems [81] and it is already known that regular physical activity and exercise improve well-being and quality of life [82] and optimize mood [83] and sleep patterns.

Physical Activity (PA) is defined as any body movement produced by skeletal muscles causing energy expenditure. Physical activities that involve regular and repetitive structured movements also constitute exercise. It was shown in a meta-analysis study that examined body image disorder and physical activity level according to BMI in adolescents that physical activity can be effective in preventing body image perception concerns and increasing body satisfaction [84]. However, Rote et al. [85] reported that moderate and high levels of daily living physical activity in women were associated with physical well-being but did not affect body image. It shows that structured exercises to improve body image are a better option than physical activity.

Sun et al. [86] argued that pregnant women who exercise more have better body image satisfaction. Women who are dissatisfied with their postpartum body image are associated with lower exercise levels [87]. Fougner et al. [88] reported that women who were aged 70-85 years and who participated in group exercises (2/60 minutes per week) consisting of balance, flexibility, coordination, and agility exercises had positive effects on their self-image and self-esteem feelings. Paulo et al. [89] reported that strength and aerobic exercises (3 for 9 months/week) changed body image in postmenopausal women with breast cancer treated with aromatase inhibitors, which have many physical and psychosocial side effects. Cristobal et al. [90] reported that body image improved as well as improvements in depression, anxiety, and sexual function with 16 weeks of continuous and intermittent aerobic exercise training in women with polycystic ovary syndrome.

Pilates involves exercises that consist of isotonic and isometric contractions developed by Joseph Pilates that emphasized the muscles responsible for the static and dynamic stabilization of the body, consisting of the abdominal, transverse abdomen, multifidus, and pelvic floor muscles. Pilates exercises improve strength, endurance, flexibility, and body balance. Pilates exercises are recommended as an effective and alternative treatment for improving postural harmony and balance in women with breast cancer receiving hormone therapy [91]. Stan et al. [92] reported significant improvements in mood and body image, along with increased upper extremity range of motion and quality of life, as a result of 12-week Pilates exercises applied to women with breast cancer who had undergone mastectomy. Cristobal et al. [93] also compared mat Pilates and instrument Pilates practices in adult women and reported that both treatments improved body image, and reduced body dissatisfaction and emotional dissatisfaction.

Aquatic exercises increase the feeling of physical comfort, mobility, and flexibility by reducing the gravitational force provided by the aquatic environment and decreasing pain. They also improve venous return because of increased hydrostatic pressure. However, gymnastics, strength, aerobics, flexibility, and heterogeneous exercise programs can be created [94]. Smith et al. [95] reported significantly less physical discomfort, improved mobility, and improved body image and health-promoting behaviors when compared to those who did not exercise in water (6 weeks/60 minutes per week) according to the aquatic exercise program they applied to women who were at 19 weeks gestation. Rodriguez et al. [96] reported that Water Resistance Interval Training (14 weeks/week 3/60 minutes) applied in addition to the Mediterranean Diet improved body composition
variables in terms of fat mass loss and muscle mass gain in women aged 65 and over when compared to dieters only, but found that it did not improve body image perception. In-Water Exercise can be an alternative method to help to improve body image perception and can be applied to body image disorders.

The mental and physical benefits of exercise were documented in previous studies. Physical exercise is performed not only for reasons associated with health, but also for physical appearance such as body shape, body weight, and muscle mass. After many studies in which the researchers showed the positive effects of exercise on body image disorder, exercise behaviors that will negatively affect body image disorders appear. Compulsive exercise behavior is seen together with eating disorders in anorexia nervosa and bulimia diseases. Compulsive exercise is separated from health exercise in that it is done as a result of behaviors such as the desire to exercise at inappropriate times or environments, injury because of exercise frequency and continuing to exercise, feeling intense anxiety, depression, and distress when not exercising, feeling uncomfortable with inactivity, using exercise as a leave to eat [97]. According to the evidence in the literature, although exercise has positive effects on body image when it focuses on body functionality, it is not successful on body image when it is aimed at improving body shape or appearance [98-101].

As a result, combined exercises that include balance, flexibility, coordination, agility, resistance exercises, aerobic exercises, Pilates exercises, and In-Water Exercises can be used as an alternative method for women who have body image disorders. However, more randomized controlled studies are needed to increase the evidence in this field. On the other hand, harmful exercise behaviors that can be caused by exercises that focus on body appearance must not be forgotten and detailed studies should be conducted in this field.

Manual Therapy

Body image is how individuals physically perceive their bodies through sensations and feelings. There are several ways that massage can affect body image. For example, providing a woman with safe therapeutic touch can enable her to address the bodily dimension of the problems. Having people touch their damaged bodies themselves after trauma can help them re-experience their bodies more positively [102].

The effects of craniofacial massage on the quality of life concerning menopause, mental health, and body image perception were investigated in a randomized controlled study that was conducted with 65 postmenopausal women. Participants who received craniofacial massage therapy for 1 day a week and 3 weeks had positive effects on the perceived quality of life depending on the symptoms experienced by menopausal women when compared to those who did not receive massage therapy, and the mental health and body image improved in this population [103].

The effects of massage practices on body image were examined in a study that was conducted on 3 women who experienced breast loss as a result of breast cancer. Women, who received 6 sessions of massage, preferred one of the massage areas such as feet, arms, face, and back. Massages continued with relaxation and Euphrexia Stroke Applications including breathing exercises. According to the comments of the women who received massage treatment, improvements were made in general relaxation, coping with sleep problems, and changing body images [104]. Manual therapy practices can positively contribute to body image development and psychosomatics by stimulating bodily awareness.

In summary, many physical, environmental, and psychosocial factors may cause negative body image perception in women. Complementary therapies such as physical activity and exercise, yoga, dance therapy, body awareness therapy, and manual therapy can all be recommended for women to improve body image.

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