


# Perceived Benefits of a Guided Exercise Program Among Older Adults

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## Keywords

Prevention, Quality of Life, Physical Activity, Aging

## Introduction

As the age of the U.S. population continues to increase, promoting healthy aging becomes an important public health concern. Projections for 2030 estimate that the number of individuals 65 years and over will reach 74 million in the United States alone and persons 85 year and older will be the fastest growing segment of the population (Zaleski et al., 2016). The US Healthy People 2030 objective for older adults aims to increase engagement in light, moderate, or vigorous leisure-time physical activities especially among those with reduced physical or cognitive function. Physical activity improves cardiovascular and respiratory health (Burzynska et al., 2014), increases muscle strength (Ramsey et al., 2020), improves functional mobility (Liu et al., 2014), improves cognitive functioning (Ludyga et al., 2020), and reduces risk of Alzheimer's disease, diabetes, cardiovascular disease, stroke, and some types of cancer (Meng et al., 2020; Müllers et al., 2019; Langhammer et al., 2018) in older adults. As a health promotion strategy, physical activity is the most promising nonpharmacological, noninvasive, and cost-effective approach for healthy aging (Lachman et al., 2018).

Despite the benefits of physical activity, it continues to be an underutilized modality for health. A recent report states that only 12.7% of adults 65 years and older meet the daily recommended amounts of exercise (Clarke et al., 2017). A study by Dedeyne et al. (2018) revealed that older adults participate in exercise programs because it helps them perform activities of daily living (ADL) (92%), helps foster healthy aging (91%), and increases one's lifespan (81%). However, several barriers to older adult participation and adherence to an exercise program exist. One study identified the perception that daily activities are enough to be

considered exercise and that a formal physical exercise program is no longer suited for them as one type of barrier. (Ahmad et al., 2014). In their study Ahmad et al., also found among adults with sarcopenia, the males' lack of motivation to exercise affected participation while female participation was affected by family and friends' support. Ahmad et al., (2014) found that one approach to engaging older adults to participate in regular physical activity is through guided exercise programs conducted in a group setting. Group exercise may promote exercise adherence by providing both external motivation and support (Ahmad et al., 2014).

Essentrics is a type of guided exercise program. It is similar to Tai-Chi and Yoga which share the same fundamental goal of mastering control over lifting and moving the body in space while performing low impact exercise and using the body weight as the resistance force for strengthening. Esmonde-White (2015), the creator of Essentrics, believes that the guiding principle behind Essentrics workouts is to rebalance the full musculoskeletal system through equally emphasizing strength and flexibility training. Essentrics quickly rose to popularity and was used by the Canadian National Sports Federation for high level/Olympic athletes and continued to be aired by the American PBS network as part of their fitness program offerings and fundraising strategy (Esmonde-White, 2015). In addition, the

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creator of Essentrics reports that “there are over 3000 certified Essentrics instructors teaching the program worldwide which easily translates to thousands of practitioners since its inception”. Despite its growing popularity as a guided exercise program, little is known about the benefits of Essentrics. To the authors’ knowledge, there is no quantitative or qualitative research on Essentrics in the research literature.

The purpose of this qualitative study is to explore the experiences of adults who participated in an Essentrics program. The guiding research question was the following: What are the perceived benefits of participating in Essentrics?

## Methods

### Design and Data Collection

This is a retrospective, qualitative study that explored the perceived benefits experienced by older adults who participated in a one-hour Essentrics session twice a week during the past year. Participants who participated in the Essentrics class completed a pre-class questionnaire that included demographic information and medical history to determine safe inclusion for the Essentrics class. Any participant that reported a history of orthopedic or neurologic dysfunction that would preclude safe exercise participation was excluded from the study. Participants who agreed to participate in the study received a link to the questionnaire. The instrument included both closed and open-ended questions addressing why they tried and why they continued Essentrics, and what benefits they experienced. The participants were also asked to describe their experiences with Essentrics and how it affected their functional mobility, flexibility, strength, chronic pain, and other perceived benefits. After questionnaires were completed, participants received an invitation to the focus group discussion to explain and expand the context of their responses. The hour-long focus group was conducted and recorded using a Zoom meeting hosted by the primary researcher. The video recording was immediately sent to an electronic transcription service who provided the transcription the following day. Thematic analysis was used to examine their perceived benefits highlighting similarities and differences and generating unanticipated insights.

### Participants

Adelphi University Institutional Review Board approved the study (#060620). Participants were recruited through a solicitation script that was sent to those who were enrolled in the Essentrics class during the past year. Participants in a concurrent quantitative research study, “The Effect of Essentrics on Strength, Flexibility and Body Composition,” were also invited to participate in this study. Out of the 11 participants who gave electronic informed consent, 2 dropped out from the Essentrics classes after six sessions and were not included in the study. Nine participants completed the questionnaire while six out of nine participants participated in the focus group discussion. The participants’ age ranges from 59 to 81 with a mean age of 68-years-old. There were six females and three males. Three participants are actively employed while the rest are retired. The mean number of sessions attended by the participants during the study period was 28.7 sessions ranging from 21 to 40 sessions. It should be noted that all the participants were actively involved with some form of regular physical activity (Adult Fitness Program, walking, and swimming) when the research project started. During the COVID-19 pandemic, Essentrics, conducted virtually, was the only physical activity involvement that they had. [Table 1](#) shows participant characteristics.

### Data Analysis

Responses from the closed-ended questions in the questionnaire were tabulated to obtain frequencies and rank. Responses from the open-ended questions were encoded and analyzed for common themes. The dialogue from the focus group discussions was transcribed using an electronic transcription service which was made available the following day. The first author proceeded to review and correct mistakes in the electronic transcription while listening to the recording. Thematic analysis as described by [Braun and Clarke \(2014\)](#) was used to examine data from both the open-ended questions in the questionnaire and the focus group transcription. The steps included familiarization of the data, generating initial codes, identifying, reviewing, and

**Table 1.** Participant Characteristics.

Participants	Questionnaire	Focus Group Discussion	Age	Gender	Number of Sessions	Employed
1	Y	N	62	F	25	Y
2	Y	Y	59	F	24	N
3	Y	Y	68	F	22	Y
4	Y	Y	69	F	21	Y
5	Y	Y	81	M	40	N
6	Y	Y	65	F	33	N
7	Y	Y	68	M	33	N
8	Y	N	73	M	27	N
9	Y	N	68	F	33	N

**Table 2.** Perceived Benefits After Practicing Essentrics

What Benefits Did You Experience After Practicing Essentrics?	#	Rank
I feel more flexible	8	1
Essentrics improved my functional mobility	8	1
Essentrics improved my balance	7	2
I feel stronger	6	3
I feel relaxed after the Essentrics workout	6	3
Essentrics improved my posture	5	4
I feel energized after the Essentrics workout	5	4
I noticed that my body was getting toned	4	5
I feel more confident	3	6
I started losing weight	2	7
Essentrics helped my recovery from surgery/medical procedure	2	7
I feel younger	2	7

defining themes. The first author proceeded to identify the initial codes and themes from both the questionnaire and the focus group discussion. The second author who was not involved in the data collection reviewed and discussed with the rest of the authors the themes identified. Perceived benefits on Essentrics were identified through this process.

## Results

Eight out of the nine participants indicated that they felt more flexible and noted an improvement in their functional mobility after participating in Essentrics. The second most common benefit that they experienced was improvement in balance (seven out of nine). This was followed by comments of feeling stronger and feeling relaxed after the Essentrics workout (six out of nine). Five participants indicated that Essentrics addressed their chronic pain, improved their posture, and made them feel energized after the workout. Table 2 lists the benefits that participants experienced after participating in the Essentrics workout.

### *Increased Flexibility*

The most common perceived benefit after participating in the exercise program was increased flexibility and was elaborated in the following comments:

“Before starting Essentrics classes I could not bend forward to even touch my knees. Presently I can get fingertips within two inches of the floor and can tie shoelaces and pick objects off the floor without pain.”

Another participant noticed an increase in flexibility throughout the classes.

“I find that in the stretching exercise, I’m reaching further, twisting back further. And that’s got to have something to do with the release of the pain and the discomfort the fact that I’m moving that far. I guess the blood is flowing better and the muscles are stretched as they’re supposed to after all this. It’s just like night and day”.

### *Improved Functional Mobility*

Eight of the nine participants noticed improvement with ADL. Participants also stated they had better ability regarding reaching for objects and changing positions like getting onto knees while performing house cleaning chores.

“Daily tasks became easier, for example: reaching things on high shelves, bending to tie shoes, lifting one leg to put on pants”

Others reported greater ease with tasks such as:

“Getting up from a seated position, climbing up stairs, lifting heavy objects”

“Especially noticed in bending, and getting out of bed in the morning”

Besides the benefits that relate to ADL, some participants found a carryover from the Essentrics exercise program with other exercise activities they engage in saying:

“In particular the weightlifting and treadmill workouts became less challenging as the lower back muscles responded to the stretching routines.”

“Since my hip flexors are more stretched, my recovery was quicker”

Another stated improvement in walking and stretching:

“My gait and stride during walking. My ability to stretch and be flexible when I do stretching on my own.”

### *Enhanced Balance and Body Awareness*

Balance was the second most common motivation why participants tried Essentrics for the first time. Participants shared in the focus group that balance is a concern as one ages and this program specifically addresses this concern.

“I feel like it’s more concentration on balance which I think is as you age that’s really so important. In this program, those hip cleaners and anything you do on one foot is very challenging.”

“Having a better idea of my body and space and that’s using the sensory feedback, all will have an impact on perhaps helping us with our balance because that is body and space. So just getting that sensory feedback, I think it’s very important as we age”

After participating in the classes, seven of the nine participants indicated that Essentrics improved their balance, making it the second most common benefit that they experienced. Participants stated:

“My balance is so much better, even when we are doing the hip cleaners. I used to have to hold on to something and now I don’t. And that’s even on my bad ankle. It’s amazing”.

“I can adopt the “tree” yogic posture more readily, which is standing and putting one foot on the inner calf of the other leg.

Body awareness also improved in the group. Participants reported increased ability to engage muscles with the instructions provided by the course instructor and relate this new sense of body awareness to their sense of balance.

“The core, I’m giving the understanding, is the most important aspect not only for health but for balance, for strength. And that’s something I still need to work on but it’s made it more conscious for me”

“When you say that you’re pulling your muscles off when you clear your arms out of your shoulders, then I really think about that. I try a little harder and it seems to be working more”

“When you do hear those little cues, it makes your brain kind of thinking about what you’re doing and how to really enhance the exercise: not just do it but try to do it right and do it so that you get more benefit. I think that helps so much. And helping us visualize the exercise like when you call the lever stretch, that made so much sense to me because you think of your arms as a lever. And that helped me understand what you are trying to get out of the exercise.”

One participant stated that the program, “Felt as if my whole body was being paid attention to; it woke up my body

and muscles. We tend to focus on one area or large muscle groups only when we exercise but this accentuated the need to address all muscles.”

### *Increased Strength and Improved Muscle Tone*

Five out of the nine participants reported improved strength and four out of the nine noticed improved muscle tone after performing the classes. The benefits of strength were demonstrated in these participants who noticed increased ability with:

“Being able to lift more heavy objects, being able to squat longer while working”

“Cleaning chores around house were easier, I have more strength to lift heavy objects”

### *Feeling Relaxed and Energized*

Three out of the nine respondents indicated that they participated in the Essentrics workout to help decrease their stress levels. After practicing Essentrics, six out of nine participants reported that they felt more relaxed after the workout, which made it the third most common benefit that participants experienced as demonstrated in these comments:

“I feel relaxed, actually very relaxed almost that I could put my head down”

“Improves my mind, mood and body”

While four out of the nine respondents indicated boosting their energy levels as a reason why they participated in Essentrics, five out of the nine who participated said they felt energized after the workout. The energy boost extended not only after the exercise but also throughout the day as supported by these comments:

“I found my energy levels had increased but I kind of attributed that to the fact that I’m sleeping much better. It could also be the fact that the blood is flowing and so on. But it definitely made a difference”

“Increased energy, after a short rest after class”

### *Improved Posture*

Five out of the nine participants felt that their participation in Essentrics improved their posture. One participant explained:

“What happens as we age is that things tend to collapse and go downward because of poor posture or the loss of bones”

After Essentrics, several participants stated:

“I realized that I’m certainly more aware of my posture and it’s so much easier to just sit up straighter. And I do that often now whereas

before, I don't know. I wasn't really thinking of it may or it didn't click in my head to just you know, pull up. It was very easy to do"

"I do feel myself sitting up straighter"

"Well, I have found myself to be more aware of my posture that I try to carry it over to when I walk. I walk in the morning. And so I am more conscious of lifting my head and stretching my spine"

## Discussion

Essentrics is a guided exercise program that is similar to Tai-chi and Yoga that use gentle and low-intensity exercises. Unlike Tai-chi and Yoga that originated from ancient culture in China and India, respectively, Essentrics was created in the 1990s in Montreal, Canada by a professional ballerina (Esmonde-White, 2015). After realizing that she developed bulky muscles while teaching aerobics, she developed the program "Classical Stretch," which later was called Essentrics. Currently, there is no empirical data or research regarding why people adopt the practice of Essentrics and its benefits. This qualitative study approach provided insights into the perceived benefits of Essentrics, a guided exercise program.

Considering that there is no research literature on the Essentrics program as of date, the authors sought to explain the benefits that this qualitative study approach found among participants in the research using the foundational techniques employed in the Essentrics program: use of eccentric training and stretching. The name "Essentrics" was adopted because the program creator believes that the program uses eccentric muscular contractions, the lengthening of a muscle as it contracts, as a foundational technique in most exercises in addition to stretching. It is a way for a muscle (the agonist) to "reign in" its opposing (the antagonist) muscle to perform a controlled movement. Many compare eccentric contractions to a car brake when applied while still accelerating where the brake allows the motion to occur but in a controlled manner. This type of motion occurs throughout the day. For example, sitting into a chair involves an eccentric contraction of the quadriceps muscles which controls the body so one does not "plop" into the chair. Eccentric contractions also occur while walking down steps, which requires controlled motion of the thigh muscles. Eccentric muscular contractions are an imperative part of most movements during daily or sport activities (Hody, et al., 2019). One of the hallmarks of Essentrics technique is pulling up or pulling out or pulling away from the body's core while performing exercises which coincides with the earliest description of eccentric exercises as "excentric" with "ex" meaning away from, and centric referring to center thus giving the meaning of moving away from center (Lindstedt et al., 2001).

There has been a growing interest in eccentric training due to its mechanical, neural, and metabolic properties (Hody, et al., 2019). A study suggested that eccentric contractions can generate greater forces compared to others for a given angular velocity (Hortobágyi and Katch, 1990). Compared to concentric contractions, eccentric contractions also require less activation

of motor units and consume less oxygen and energy (Abbott et al., 1952). The ability to generate higher forces while requiring less energy makes eccentric training a suitable work out for individuals dealing with muscle weakness and atrophy, decreased mobility and decreased aerobic capacity associated with certain medical conditions, and often symptoms found to be common among the aging population (Hoppeler, 2016). Besides being beneficial to an aging population or one with chronic disabilities when it comes to improving quality of life and maintaining or restoring exercise capacity, eccentric muscle work has also been shown to help improve athletic performance (Gault & Willems, 2013; Hyldahl & Hubal, 2014; LaStayo et al., 2014). A study by Lastayo et al. (2003) compared an 11-week program of low effort eccentric cycle ergometry with conventional weight training among elderly subjects and revealed that those who were in the eccentrically trained group, showed significantly greater gains in strength, balance, ability to descend stairs, and decreased risk of falls. A distinctive feature of Essentrics sequences are gentle, isotonic, slow-moving movements that flow from one plane to another in a rotational and lengthening manner following the myofascial chain that helps the body move as a unit (Esmonde-White, 2015).

Eccentric contractions have been associated with a type of muscle damage which could discourage their use at times. Recently, current research found that performing repeated sessions with submaximal eccentric contractions appears to be the most efficient strategy to foster eccentric training-induced adaptations that would prevent further exercise-induced muscle damage and delayed-onset muscle soreness (Hody, et al., 2019). Essentrics uses only the body weight as the resistance to prevent muscle damage or soreness. Furthermore, Essentrics instructors are trained to cue participants during teaching to listen to the body's response to the movement, specifically pain. That means, participants are reminded not to exercise in pain. Participants in this study did not report any post-exercise pain or soreness and reported feeling more relaxed and energized, and the group of participants with chronic pain said their pain was reduced after performing the Essentrics sessions.

Essentrics also involves stretching. Stretching has been shown to create instantaneous and long-lasting changes to maximal joint range of motion, often referred to as flexibility (Opplert & Babault, 2018; Stecco et al., 2020). Essentrics incorporates several stretching techniques such as static and dynamic stretching and proprioceptive neuromuscular facilitation (Esmonde-White, 2015). Dynamic stretching is typically characterized as controlled and repetitive movements without bouncing and involves the active tightening of muscles and moving joints through their full range of motion. Because muscles are contracting actively and repeatedly to stretch muscles, dynamic stretching increases muscle temperature (Fletcher, 2010; Yamaguchi & Ishii, 2005; Herda et al., 2008). This enhances tissue extensibility which helps improve range of motion and flexibility (Opplert & Babault, 2018). Using the dynamic stretching and eccentric

contraction workout not only increases the range of motion (Page, 2012) and lengthens the muscles, but also strengthens tissue (Reeves et al., 2009, Roig et al., 2009). As a former ballerina, the Essentrics creator believes that ballet is a form of eccentric training combined with dynamic stretching leading to both increased flexibility and strength.

Several studies reported that stretching efficacy was not limited to the targeted joint being moved (Behm et al., 2016; Chaouachi et al., 2015; Wilke, Niederer et al., 2016). For example, Chaouachi et al. (2015) found that unilateral stretching performed on one lower limb also increased the range of motion of the contralateral limb. Behm et al., (2016) found that stretching of the lower limb increased the maximal range of motion of the distant upper limbs and vice versa. (Wilke, Niederer et al., 2016) also demonstrated that stretching the lower limb muscles induced an increase in the maximal range of motion of the cervical spine. A narrative review by Stecco et al., (2020) supported the role of fascia and connective tissues, in explaining the efficacy of stretching beyond the targeted joint. Stecco et al. (2020) found that during stretching, the bulk of the mechanical work is done on the aponeurotic fascia, the first tissue that is stretched when the muscles are not in isometric contractions. The authors stated the muscles and tendons are secondarily involved. This concept of myofascial tissue connectivity was further supported by Cruz-Montecinos et al., 2015, who reported a significant correlation between the motion of forward tilting of the pelvis (pelvic anteversion), in a long sitting position (knees are fully extended) and the displacement of the deep fascia of the gastrocnemius medialis. Recent histologic findings showed that fascia contains contractile cells, free nerve endings, and mechanoreceptors and therefore plays a proprioceptive and mechanically active role (Wilke, Krause et al. (2016). Langevin (2005) proposed that connective tissue may function as a body-wide mechanosensitive signaling network. Wilke, Krause et al. (2016) found evidence to support the existence of several myofascial chains—specifically six myofascial meridians proposed by Myers based on anatomic dissection studies (Myers, 2014) The flow of movements in Essentrics from one plane to another as they follow the myofascial chain may help the body move as a unit. Although the concept of myofascial chains or meridians remains to be further studied, it seems that it may provide a plausible explanation for the stretching benefits experienced by the participants in this study (Myers, 2014; Wilke, Krause et al., 2016).

There are several limitations to acknowledge in this study. The sample size of nine participants with only six in the focus group makes it difficult to generalize our results. Furthermore, the participants of the study were physically active prior to engaging in the Essentrics program. In addition, the survey that provided an exhaustive list of benefits of the program may have biased the responses. Therefore, large scale mixed studies that include both quantitative and qualitative approaches are needed to validate findings.

## Conclusions and Recommendations

The present study was the first to investigate the perceived benefits of Essentrics among older adults who participated in the guided exercise program during the past year. Participants perceived that Essentrics improved their flexibility, balance, and strength. These are physical markers critical for older adults to maintain their functional mobility. In addition, participants also reported feeling relaxed and energized and experienced improved posture and body awareness. Participants continued practicing Essentrics because of immediate positive outcomes (enjoyment and feeling good) and convenience (little equipment and space). Essentrics' unique approach of combining eccentric training with stretching led to perceived benefits that are imperative to allow older adults to remain independent and maintain or improve their quality of life.

This qualitative study approach provided detailed and rich narratives of the perceived benefits of Essentrics, a guided exercise program. It is recommended that a large-scale mixed study approach be conducted among Essentrics practitioners to validate the benefits that participants experienced. In addition, interventional studies are needed to provide quantitative data of the potential benefits of Essentrics.

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