International Journal of
Disabilities Sports and Health Sciences
e-ISSN: 2645-9094

RESEARCH ARTICLE

Understanding the Perspectives of Women on Pilates Through the Use of Metaphors

Bekir Erhan ORHAN[1*], Dilek UZUNÇAYIR[2] and Aydın KARAÇAM[3]

[1]Istanbul Aydın University Faculty of Sports Sciences, Istanbul / Türkiye
[2]Anadolu University, Anadolu University Institute of Educational Sciences, Eskisehir / Türkiye
[3]Istanbul Aydın University Faculty of Sports Sciences, Istanbul / Türkiye
*Corresponding author: bekirerhanorhan@aydin.edu.tr

Abstract
This study aimed to gain insight into the perspectives of women who practice Pilates by analyzing the metaphors they use to describe the exercise. The study involved 218 women who attended Pilates classes at the Istanbul Gaziosmanpaşa Municipality facilities thrice a week for sixty minutes each time. The research utilized a qualitative model involving a systematic content analysis and descriptive analysis of the qualitative data to understand the participants' viewpoints through metaphors. The participants, mainly comprised of females, provided 218 codes through their use of metaphors, with some codes overlapping. The codes were then organized into eight categories: Mood, Consciousness, Relaxation, Body awareness, Self-confidence, Energy, Happiness, and Therapy, which ultimately led to the formation of two themes, Psychological and Physical. After analyzing the metaphors, it was evident that the participants had a generally positive view of Pilates and that they believed it contributed positively to their health and well-being, both physically and psychologically. In conclusion, the study revealed that the participants perceived Pilates as a beneficial contributor to their overall wellness.

Keywords
Physical Activity, Quality of Life, Psychological Health

INTRODUCTION

In order to decrease the primary reasons for sickness and fatalities using health promotion techniques, it is suggested that one participates in physical activity that is appropriate for their age, physical fitness level, and current health status (Tremblay et al., 2010). It is assumed that progressive physical exercise contributes to developing a healthy attitude, promotes positive psychological dimensions, and improves the quality of life (Faria & Silva, 2000; Valois et al., 2004). However, due to the advancement of technology, a sedentary lifestyle is leading to an increase in obesity and cardiovascular diseases. In addition, mental disorders caused by stress and daily life problems, such as anxiety disorders or depression, are also on the rise. Pilates is a physical activity that has recently gained popularity, especially among women, due to its quick recovery and resulting well-being (Gallagher & Kryzanowska, 2000; Latey, 2002; Stanko, 2002). Although Pilates is primarily a physical conditioning method that helps develop a practitioner's body and mind, it has adapted to the

Received: 01 April.2023 ; **Accepted:** 28 May 2023; **Online Published:** 25 October 2023
[1]**ORC**ID: 0000-0002-3149-6630 , [2]**ORC**ID: 0000-0003-2678-0255 , [2]**ORC**ID: 0000-0001-6509-427X

How to cite this article: Orhan, BE., Uzunçayır, D. and Karaçam, A. (2023). Understanding The Perspectives of Women on Pilates Through The Use Of Metaphors**.** *Int J Disabil Sports Health Sci*;2023;6(3):287-295..https://doi.org/10.33438/ijdshs.1275378

demand for physical activity and health (Anderson & Spector, 2000).

Joseph Hubertus created Pilates at the beginning of the 20th century as a system of physical and mental training (Pilates, 1945). Many studies have confirmed that Pilates can benefit muscle strength, endurance, flexibility, balance, injury prevention, performance improvement, and uniting the mind and body (Gallagher & Kryzanowska, 2000; Patti et al., 2021). Therefore, it has been recommended as an adult exercise method (Reyneke, 1993; LaBrusciano & Lonergan, 1996; Latey, 2002; Stanko, 2002; Smith & Smith, 2004). However, further research studies are needed to establish a scientific framework for Pilates. Some studies have reported that the Pilates program can improve physical and psychological health (Akbaş & Erdem, 2016; Karaman et al., 2017), while others have emphasized its benefits in quality of life, mental health, fatigue, physical condition, and body types (Soysal et al., 2016). In addition, non-traditional exercises like Pilates can also improve sleep quality, quality of life, depressive symptoms, and mood in older adults and adolescents (Siqueira et al., 2010).

Metaphor studies offer individuals the opportunity to express themselves. A metaphor represents more than its original meaning, creating new meanings that did not previously exist (Thornborrow & Wareing, 1998). Metaphors establish mental connections between unrelated things, while the underlying meanings of the concepts remain the same (Kovecses, 2002). Conceptual metaphors structure our thinking, according to Lakoff and Johnson. In metaphor research, the concept of "like" typically provides information about the connection between the subject of the metaphor and its source, as per Şaban (2008). The concept of "because," which is later posed, aims to explain why the metaphor is expressed in such a way. The use of metaphor refers to a way of thinking and seeing that pervades our comprehension of the world at large, as stated by Morgan (1998).

In this context, a metaphor is a powerful mental tool that individuals can use to comprehend and describe a highly abstract, complex, or theoretical situation. This study aims to uncover the perspectives of women who participate in Pilates exercises on exercises by using metaphors.

MATERIALS AND METHODS

Research Model

The research uses a qualitative research model with a systematic content analysis approach. Content analysis is a technique used to identify and classify communication content based on its graphic elements or message into categories. Bernard Berelson (1952) defines content analysis as an objective and quantitative method used to describe the explicit content of communication. Ole Holsti (1969) defines it as any research technique used to conclude by objectively describing certain features in a text. Finally, Klaus in Krippendorff (1980) defines content analysis as a research technique that links data to data to produce reproducible and valid inferences from a text, similar to the other definitions mentioned.

Working group

The research group comprises 218 women who participated in Pilates exercises. These participants also exercised at Istanbul Gaziosmanpaşa Municipality facilities for 60 minutes three days a week. The demographic information of the participants is provided in the tables below.

Table 1. Age distribution of participants

	N	min.	Max.	$\overline{X}$	Sd.
Age	218	18.00	59,00	35.48	8.6

When examining Table 1, we can see that the minimum age is 18, the maximum is 59, and the average age among the participating women is 35.48.

Table 2. Education level

Education Level	**N**	**%**
Primary Education	61	28.0
High School	85	39.0
Associate's Degree	27	12.4
Bachelor's Degree	43	19.7
Master's Degree	2	0.9
Total	218	100.0

When examining Table 2, it can be seen that the majority of the women who participated have a high school degree 39%, followed by

primary school graduates at 28%, undergraduate women at 19.7%, and associate degree holders at 12.4%. It is noteworthy that only two female participants are graduates.

Table 3. Period of participation in Pilates

	N	min.	Max.	$\overline{X}$	Sd.
Month	218	3.00	72.00	24.34	22.80

Perform Pilates exercises for a minimum of 3 months and a maximum of 72 months within five years.

Data collecting

In collecting research data, women who participated in Pilates exercises were asked to create reasoned metaphors about Pilates. In this direction, among the participants, " Pilates is like …; because…" is located. The last part of the form contains information on demographic characteristics.

In the data collection phase, the female participants were informed and completed the required forms independently. Before The study was conducted by the Declaration of Helsinki and the protocol was approved by the Ethics Committee of Istanbul Aydin University no. 2022/20 from 24.11.2022

Data analysis

The present study utilized a descriptive analysis to examine the metaphors employed by women who participated in Pilates exercises. The data collected was presented in its original form as much as possible, and participants were directly quoted when necessary, following the approach outlined by Wolcott (1994). Descriptive analysis is often used in research where the conceptual structure is determined beforehand, as explained by Strauss and Corbin (1990). Its purpose is to present findings in an organized and interpreted form. The data is explained systematically; further descriptions are interpreted while incorporating participant quotes to reflect their views, per the basic understanding. For this research, the descriptive analysis approach was adopted to determine the conceptual structure, with quotes supporting the metaphors obtained from participants' thoughts as specified by Yıldırım and Şimşek (2016).

Study on Validity and Reliability

In qualitative studies, it is essential to report the collected data in detail and explain how the researcher arrived at their results for validity (Yıldırım, 2010). Two basic procedures were carried out to ensure validity and reliability in this study. Firstly, the data analysis process was explained in detail to ensure validity, and all the obtained data were presented together in the quantitative and qualitative findings. Secondly, the themes and categories were presented to three experts and compared with the metaphor table created to ensure reliability. The research's reliability was calculated using the formula of Miles and Huberman (1994) (Trust = consensus/consensus + disagreement) by determining the number of consensus and disagreement in comparisons. The research's reliability calculation resulted in 94%. According to Miles and Huberman (1994), a study qualifies as reliable if there is 90% or more consensus among researchers and experts in qualitative research. Therefore, it can be stated that this study is reliable.

Encoding the data

The data that was collected was analyzed and separated into significant sections. It was determined which concept corresponded with each section, and a name was given to each section, creating a meaningful structure. The data set was read multiple times during the coding process. The coding process was carried out by repeatedly referring to the data set to dynamically process the code (Kvale, 1994; Morse, 2016; Silverman, 2016).

Identification of Categories and Themes

Based on the codes uncovered during the initial stage of qualitative data analysis, it is imperative to identify the overarching themes that can account for the data set and gather the codes under specific categories. In this context, more abstract coding is utilized in thematic coding. Initially, the codes discovered in the first stage are compiled, and common characteristics between them are determined. Thematic coding involves identifying similarities and differences between codes that possess distinct characteristics. To achieve this, codes related to each other are grouped, leading to their categorization. Categories of the exact nature make up the overarching themes. It is crucial to consider internal consistency while conducting thematic coding(Strauss & Corbin, 1990; Baltacı, 2017).

Therefore, when conducting thematic coding, connection with the data set upon which the themes are based. Furthermore, external consistency, which is the ability of all themes to explain the obtained research data coherently, is also crucial. As a result, themes are developed independently. Once categories and themes are determined, the coding process and data are organized according to the codes coherently to create a merged, meaningful collection(Patton, 1990; Silverman, 2016; Merriam & Grenier, 2019).

Organizing the Data by Codes, Categories, and Themes

A systematic structure was established to organize the data meaningfully using detailed and a significant factor is establishing a meaningful thematic coding. The collected data was then reorganized according to this structure, with some data requiring additional coding. While editing the data, essential insights were uncovered, and the findings were redefined and interpreted accordingly. It is crucial to describe, explain, and present the data in a way that is easily understandable for the reader. Thus, in the findings section, the researcher refrained from providing personal views and comments and instead presented the information in a processed format (Miles & Huberman, 1994; Denzin & Lincoln, 2008; Şimşek & Yıldırım, 2011; Baltacı, 2017).

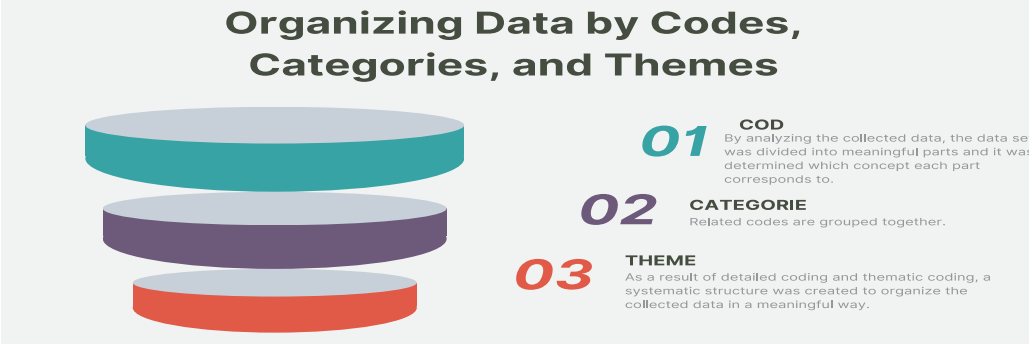

Figure 1. The process of organizing data into codes, categories, and themes.

As shown in Figure 1, analyzing the data involved identifying codes, categories, and themes based on the obtained categories.

Analysis of Results

In the final stage, he failed to provide explanations regarding the process of attributing meaning to the collected data, elucidating the connections between the findings, establishing cause-and-effect relationships, deriving conclusions from the findings, and emphasizing the significance of the obtained results (C. Marshall & Rossman, 2014; Connelly, 2016).

Research Ethics

In order to conduct this research, necessary permissions and consents were obtained from the Social Sciences Ethics Committee of Istanbul Aydın University. This decision was dated 24.11.2022 and numbered 2022/20. Furthermore, detailed information about the research content was provided to all participating volunteers.

RESULTS

Upon examining the metaphors generated by participants, it is apparent that they possess a generally positive outlook on Pilates exercises, with no negative opinions expressed. The participants, mainly composed of 218 females, created 218 codes through their metaphors, overlapping some codes. From these codes, eight categories were derived: Mood, Consciousness, Relaxation, Body awareness, Self-confidence, Energy, Happiness, and Therapy. Ultimately, these categories gave rise to 2 themes, namely Psychological and Physical.

Table 4 displays the codes from the metaphors formulated by 218 female participants who participated in the study.

Table 4. Codes

Code	Frequency	Code	Frequency	Code	Frequency
Breath	24	Energy	8	Life	3
Water	13	Freedom	7	Peace	7
Happiness	8	Lifestyle	10	Relaxation	6
Life	8	Information	2	Flower	5
Freedom	7	Health	2	Quality of life	4
Peace	7	Sedative	2	Habit	3
Excitement	5	Need	2	Nature	3
Health	5	Green	2	Beauty	2
Love	3	Body	2	Tire	2
Therapy	2	Air	2	Development	2
Awareness	2	Struggle	2	Gift	2
Entertainment	2	Control	1	Book	1
Joy	1	Wise	1	Spring	1
Perfect	1	Respect	1	Visual show	1
Vigor	1	Smile	1	Passion	1
Sea	1	To be strong	1	Discovery	1
Music	1	Tasty	1	Sky	1
Weather	1	Game	1	Beginning of the end	1
Vitamin	1	Bond	1	Regeneration	1
Unwind	1	Break	1	Morale	1
Cleaning	1	Iron	1	Tree	1
Myself	1	Arrow	1	Precious time	1
Gymnastics	1	Taking time for oneself	1	Ball	1
Confidence	1	Rainbow	1	Sport	1
Food	1	Pleasure	1	Turning point	1
Ocean	1	Investing in the body	1	Playdough	1
Fitness	1	Machine	1	Heeled shoes	1
Sleep	1	Victory	1	Flexibility	1

Table 5. Categories

Categories	N	%
Mood	20	9.2
Consciousness	67	30.7
Relaxation	17	7.8
Body Awareness	34	15.6
Self-confidence	22	10.1
Energy	21	9.6
Happiness	8	3.7
Therapy	29	13.3
Total	218	100.0

Upon examination of Table 5, eight categories were revealed using codes created by the kadis who participated in the research. Upon further examination of these categories, it was observed that most responses, totalling 30.7%, fell under "Consciousness". Following this, 15.6% were classified as "Body Awareness", 13.3% as "Therapy", 10.1% as "Self-confidence", 9.6% as "Energy", 9.2% as "Mood", 7.8% as "Relaxation", and concluding with "Happiness" with 3.7%.

Upon examination of Table 6, it becomes clear that the categories' themes emerged from the metaphors used by the women who participated. As a result of the participants' words, two themes were identified: "Psychology" and "Physical." Further examination of the themes shows that 162 participants discussed the psychological benefits of Pilates exercises, while 56 participants focused on the theme of "Physical."

Table 6. Themes

Themes	N	%
Psychological	162	74.3
Physically	56	25.7
Total	218	100.0

Table 7. The participants provided some examples of metaphors.

Participant Number	Example Sentences	Code	Category	Theme
38	"Pilates is like life because the working iron does not rust; we live healthily."	Life	Body Awareness	Physically
49	"Pilates is like freedom because many of the movements that we restricted at the beginning, we do as if we were on a feather after learning."	Freedom	Self-confidence	Psychological
100	"Pilates is like a rainbow because every colour and every dance gives happiness and excitement."	Rainbow	Mood	Psychological
102	"Pilates is like water because it is indispensable for human beings."	Water	Consciousness	Psychological
109	"Pilates is like looking at a blue sky because it gives peace, relaxation, relaxation."	Sky	Relaxation	Psychological
120	"Pilates is like play dough because it reshapes your body."	Playdough	Energy	Physically
160	"Pilates is like high heels because it makes you stand upright and stand out."	Heeled shoes	Body Awareness	Physically
168	"Pilates is like music because the more you listen to it, the more happiness it takes away from all troubles."	Music	Therapy	Psychological
190	"Pilates is like life because the more we move, the better our quality of life."	Life Quality	Energy	Physically
210	"Pilates is like a breath because when we breathe in, our whole being comes to life, and our soul is reborn."	Breath	Consciousness	Psychological
218	"Pilates is like medicine for the soul because when I do pilates, I feel perfect."	Medicine	Energy	Physically

When examining Table 7, several metaphors were formed by the women who participated in Pilates exercises

DISCUSSION

This study aims to uncover the favourable or unfavourable attitudes of women who engage in Pilates workouts, as indicated by the metaphors they generate to describe their experiences. The research for this objective indicated no bad attitudes among the participants and that Pilates workouts were generally well-regarded.

Pilates-based training offers numerous public health benefits, including improved physiological, psychological, and functional development of postural and motor skills (Lange et al., 2000). However, although Pilates exercises have been shown to provide physical and psychological benefits, research on Pilates has mainly focused on its physical benefits, and there need to be more

studies on its psychological benefits. Furthermore, while existing data suggests that Pilates can enhance body awareness, its psychological effects have not been directly evaluated (Araújo et al., 2012). Therefore, this study, which uses metaphors to gather individuals' perspectives is of particular significance.

In 2002, Ungaro stated that Pilates offers complete coordination of the body, mind, and spirit while reducing stress on the body. It also enhances attention, motivation, and cognitive functions. Adams et al. conducted a study to explore the experiences of their students in a Pilates class over a semester. Their findings supported the results of our study, as 78% of students reported an increase in body awareness and improved mental and physical health through Pilates.

In 2009, Teresa Garcia Pastor concluded that Pilates benefits health, physical and behavioural aspects, and can improve body composition. However, a study by Santana Pérez in 2010 argued that there was no significant change in body composition and flexibility. In contrast, Mokhtari et al. (2012) reported that Pilates exercises can have positive psychological effects by reducing depression and increasing blood serotonin levels. While there are differing opinions about the benefits of Pilates, most women in the study emphasized the psychological benefits. Caldwell et al. (2009) also found that Pilates-based exercise can improve psychological parameters. Some participants also mentioned physical benefits through metaphors. Rodrigues et al. (2010) discovered similar positive effects on the quality of life index of healthy older women following Pilates-based exercise twice a week for eight weeks. These results support other published explanations that the Pilates-based method positively impacts psychological functioning (Pilates & Miller, 1945; Lange et al., 2000).

Furthermore, Garcia and colleagues (2020) discovered an enhancement in flexibility and lower body strength due to Pilates exercises. Meanwhile, Duyan, İlkim, and Çelik (2022) concluded in their research that Pilates exercises decrease social appearance anxiety and improve psychological well-being. In another study, Silva and co-authors (2022) found that engaging in Pilates exercises helps develop posture and balance among women. The present study corroborated with the previous investigations as it was determined that the participants had favourable perceptions, particularly regarding their physical and mental health. Moreover, their use of metaphors reinforced these findings.

Upon analyzing the metaphors constructed by the participants in the current study, it is apparent that they viewed Pilates exercises as highly beneficial. This perception was shaped mainly by the positive psychological impact they experienced and their hopes for the physical improvements resulting from the exercises. The study highlights the potential of Pilates exercises in enhancing women's perception of their physical and mental health.

Pilates exercises can positively impact life satisfaction, physical self-concept, and perception of health status. Future research could focus on identifying which aspects of the exercise program contribute to physical and psychological health. These findings highlight the significance of Pilates exercises in supporting individuals' psychological and physical development. Therefore, it is recommended that future studies use multiple evaluation methods to emphasize the importance of Pilates exercises.

Conflict of Interest:

There is no personal or financial conflict of interest within the scope of the study.

Information on Ethics Committee Permission

Board Name: Istanbul Aydın University Social Sciences Ethics Committee Commission
Date: 24.03.2022
Issue/Decision Number: 2022/20

Researchers' Contribution Statement:

Research Design- BEO, DU, AK; Statistical analysis- BEO, DU, AK; Preparation of the article, BEO, DU, AK; Data Collection- Performed by BEO, DU, AK.

REFERENCES

Akbas, E., & Erdem, E. U. (2016). Does the Pilates-based approach provide additional benefit over traditional physiotherapy in the management of rotator cuff tendinopathy? A randomized controlled trial. *Ann Sports Med Res*, *3*(6), 1083.

Anderson, B. D., & Spector, A. (2000). Introduction to Pilates- based rehabilitation. *Orthopaedic Physical Therapy Clinics of North America*, *9*(3), 395-410.

Baltacı, A. (2017). Miles-Huberman Model in Qualitative Data Analysis. *Ahi Evran University Journal of Social Sciences Institute*; 3(1), 1-14.

Berelson, B. (1952). Content analysis in communication research.

Caldwell, K., Harrison, M., Adams, M., & Triplett, N. T. (2009). Effect of Pilates and taiji quan training on self-efficacy, sleep quality, mood, and physical performance of college students. *Journal of bodywork and movement therapies*, *13*(2), 155-163.

Connelly, L. M. (2016). Trustworthiness in qualitative research. *Medsurg Nursing*; *25*(6), 435.

De Araújo, M. E. A., da Silva, E. B., Mello, D. B., Cader, S. A., Salgado, A. S. I., & Dantas, E. H. M. (2012). The effectiveness of the Pilates method: reducing the degree of non-structural scoliosis, and improving flexibility and pain in female college students. *Journal of bodywork and movement therapies*, *16*(2), 191-198.

De Siqueira Rodrigues, B. G., Cader, S. A., Torres, N. V. O. B., de Oliveira, E. M., & Dantas, E. H. M. (2010). Pilates method in personal autonomy, static balance and quality of life of elderly females. *Journal of bodywork and movement therapies*, *14*(2), 195-202.

Da Silva, L. D., Shiel, A., Sheahan, J., & McIntosh, C. (2022). Six weeks of Pilates improved functional mobility, postural balance and spatiotemporal parameters of gait to decrease the risk of falls in healthy older adults. *Journal of bodywork and movement therapies*, 29, 1-9.

Denzin, N. K.; Lincoln, Y. S. Introduction: The discipline and practice of qualitative research, 2008.

Duyan, M., Ilkim, M., & Çelik, T. (2022). The Effect of Social Appearance Anxiety on Psychological Well-Being: A Study on Women Doing Regular Pilates Activities. *Pakistan Journal of Medical & Health Sciences*, 16(02), 797-797.

Eysenbach, G.; Köhler, C. (2002). How do consumers search for and appraise health information on the world wide web? Qualitative study using focus groups, usability tests, and in-depth interviews. *Bmj*; *324*(7337), 573-577.

Faria, L., & Silva, S. (2000). Efeitos do exercício físico na promoção do auto-conceito.

Gallagher, S., & Kryzanowska, R. (2000). The Joseph H. *Pilates Archive Collection*.

García-Garro, P. A., Hita-Contreras, F., Martínez-Amat, A., Achalandabaso-Ochoa, A., Jiménez-García, J. D., Cruz-Díaz, D., & Aibar-Almazán, A. (2020). Effectiveness of a pilates training program on cognitive and functional abilities in postmenopausal women. *International Journal of Environmental Research and Public Health*, 17(10), 3580.

Holsti, O. R. (1969). Content analysis for the social sciences and humanities. *Reading. MA: Addison-Wesley (content analysis)*.

Karaman, A., Yuksel, I., Kinikli, G. I., & Caglar, O. (2017). Do Pilates-based exercises following total knee arthroplasty improve postural control and quality of life? *Physiotherapy theory and practice*, *33*(4), 289-295.

Kovecses, Z.(2010)*Metaphor: A practical introduction*. Oxford university press.

Krippendorff, K. (1980). Validity in content analysis.

Kvale, S. (1994). Ten standard objections to qualitative research interviews. *Journal of phenomenological psychology*; *25*(2), 14 - 173.

LaBrusciano, G., & Lonergan, S. (1996). One-On-One: Pilates™: A Method Ahead of Its Time. *Strength & Conditioning Journal*, *18*(4), 74-76.

Lakoff, G. and Johnson, M. (2008). *Metaphors we live by*. University of Chicago press.

Lange, C., Unnithan, V. B., Larkam, E., & Latta, P. M. (2000). Maximizing the benefits of Pilates-inspired exercise for learning functional motor skills. *Journal of bodywork and Movement Therapies*, *4*(2), 99-108.

Latey, P. (2001). The Pilates method: history and philosophy. *Journal of bodywork and movement therapies*, *5*(4), 275-282.

Marshall, C.; Rossman, G.B. (2014). *Designing qualitative research*. Sage publications.

Merriam, S.B.; Grenier, R.S. (Eds.). (2019). Qualitative research in practice: Examples for discussion and analysis. John Wiley & Sons.

Miles, M.B. and Huberman, A.M. (1994). Qualitative data analysis: An expanded sourcebook. Sage.

Mokhtari, M., Nezakatalhossaini, M., & Esfarjani, F. (2013). The effect of 12-week pilates exercises on depression and balance associated with falling in the elderly. *Procedia-Social and Behavioral Sciences*, *70*, 1714-1723.

Morgan, R. J. (1998). " Just like Rosa": History and Metaphor in the Life of a Seventeenth-Century Peruvian Saint. *Biography*; *21*(3), 275-310.

Morse, J.M. (2016). Mixed method design: Principles and procedures. Routledge.

Pastor, T.G. (2009). *Efecto de la práctica del método Pilates* (Doctoral dissertation, Universidad de Castilla-La Mancha).

Patton, M.Q. *Qualitative evaluation and research methods*. SAGE Publications, inc., 1990.

Pilates, J.H., & Miller, W. J. (1945). *Return to life through contrology*. Ravenio Books.

Patti, A., Zangla, D., Sahin, F. N., Cataldi, S., Lavanco, G., Palma, A., & Fischietti, F. (2021). Physical exercise and prevention of falls. Effects of a Pilates training method compared with a general physical activity program: A randomized controlled trial. Medicine, 100(13).

Reyneke, D. (1993). The Pilates method of exercise and rehabilitation. *Physiother Sport*, *18*(3), 19.

Saban, A. (2008). Metaphors about school. *Educational Administration: Theory and Practice*, *55*(55), 459-496.

Silverman, D. (Ed.). *Qualitative research*. Sage, 2020.

Şimşek, H., & Yıldırım, A. (2016). Qualitative research methods in social sciences. Ankara: Seçkin Yayıncılık.

Smith, K., & Smith, E. (2005). Integrating Pilates-based core strengthening into older adult fitness programs: implications for practice. *Topics in Geriatric Rehabilitation*, *21*(1), 57-67.

Stanko, E. (2002). The role of modified Pilates in women's health physiotherapy. *Journal-Association Of Chartered Physiotherapists In Womens Health*, 21-32.

Strauss, A.; Corbin, J. *Basics of qualitative research*. Sage publications, 1990.

Thornborrow, J.; Wareing, S. (1998). Patterns in language: An introduction to language and literary style. Psychology Press.

Tomruk, M. S., Uz, M. Z., Kara, B., & İdiman, E. (2016). Effects of Pilates exercises on sensory interaction, postural control and fatigue in patients with multiple sclerosis. *Multiple sclerosis and related disorders*, *7*, 70-73.

Tremblay, M.S., Carson, V., Chaput, J. P., Connor Gorber, S., Dinh, T., Duggan, M., ... & Zehr, L. (2016). Canadian 24-hour movement guidelines for children and youth: an integration of physical activity, sedentary behaviour, and sleep. *Applied Physiology, Nutrition, and Metabolism*, *41*(6), S311-S327.

Ungaro, A., & Sadur, R. (2002). *Pilates: Body in motion* (p. 176). London: Dorling Kindersley.

Valois, RF.., Zullig, K. J., Huebner, E.S., & Drane, J.W. (2004). Physical activity behaviors and perceived life satisfaction among public high school adolescents. *Journal of school health*, *74*(2), 59-65.

Wolcott, H. F. Transforming qualitative data: Description, analysis, and interpretation. Sage,1994.

Yıldırım, K. (2010). Raising the quality in qualitative research. *Elementary Education Online*, *9*(1).