

Vôlei Câmbio(Change Volleyball) and Social Interdependence Among Older Adults: A Case Study at Sesc Portão, Curitiba, Brazil

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Abstract:

Introduction: Beyond their physical benefits, sports participation among older adults serves as a social space where relationships, belonging, and networks of interdependence are constructed and strengthened. In Brazil, one of the sports options offered to older adults is an adapted version of volleyball, known as *Vôlei Câmbio*. **Objective:** The study aimed to identify the sociodemographic profile of participants in the *Vôlei Câmbio* (Change Volleyball) team at Sesc Portão, Curitiba, Brazil, and to understand how this sport contributes to the development and strengthening of interdependencies among its participants. **Methods:** This is a qualitative case study grounded in Norbert Elias's Configurational Sociology. Initially, 32 participants, one instructor, and the unit coordinator took part in the study. Data were collected through a sociodemographic questionnaire (nine closed-ended questions) and semi-structured interviews (22 open-ended questions for participants and 10 for professionals). Sociodemographic data were analyzed using descriptive statistics, while the interviews were examined through content analysis to understand how social relationships, the sense of belonging, and interdependencies manifested within the context of *Vôlei Câmbio*. **Results:** The results showed a predominance of women (68.75%), aged between 60 and 69 years (46.88%), retired (90.63%), with a monthly income of up to four minimum wages (71.88%), and more than half living alone (56.25%). The interviews revealed that *Vôlei Câmbio* extends beyond sports practice, serving as a space for social interaction, friendship, mutual support, and strengthening a sense of belonging. The bonds established during the sessions extend beyond the court. **Conclusion:** In light of Norbert Elias's Configurational Sociology, this sport promotes the development, maintenance, and reorganization of interdependency networks among older adults.

Key Words: - Aging, Sport, Configurational Sociology, Norbert Elias

Introduction

Population aging is a reality observed in both developed and developing countries, including Brazil. According to the World Health Organization (WHO), by 2030, one in every six people worldwide will be aged 60 years or older. This demographic transition has highlighted the need to develop strategies to promote older adults' autonomy and their physical, social, and emotional well-being (WHO, 2023).

In its report *Active Aging: A Policy Framework*, the World Health Organization (WHO, 2002) states:

“Active aging applies to both individuals and population groups. It allows people to realize their potential for physical, social, and mental well-being throughout the life course and to participate in society according to their needs, desires, and capacities, while providing them with adequate protection, security, and care when they require assistance.” (World Health Organization, 2002, p. 12).

In this context, regular physical activity and sports have been recognized as important strategies for promoting healthy aging (Izquierdo et al., 2025). Beyond its physical benefits, participation in sports fosters social relationships (Borssatto, 2024). From this perspective, understanding aging through the lens of social configurations requires recognizing that this process does not occur in isolation but is embedded in specific historical and relational dynamics that manifest differently across social contexts (Debert, 1997).

By sharing experiences, goals, and challenges, participants build and rebuild social bonds, strengthen their sense of belonging to the group, expand their social networks (Park et al., 2023), and develop relationships based on cooperation, identity, and sociability (Betti, 1998; Cruz et al., 2020).

Among sports designed for older adults, *Vôlei Câmbio* (Change Volleyball), a Brazilian adaptation of volleyball developed to meet the characteristics and needs of older adults, has gained prominence by allowing individuals with varying levels of experience and physical fitness to participate (Hauser et al., 2015). In addition to encouraging sports participation, the activity provides opportunities for social interaction, coexistence, and socialization among its participants (Hauser et al., 2015).

As a result, the availability of *Vôlei Câmbio* has expanded through institutions that promote sports programs for older adults. One notable example is the Social Service of Commerce (Serviço Social do Comércio –

Sesc), which offers sports programs at several units across Brazil. In Curitiba, for instance, *Vôlei Câmbio* is among the activities offered at Sesc Portão, aimed at promoting physical activity, social interaction, and quality of life (SESC-PR, 2025).

Although previous research has explored volleyball adapted for older adults (Federici et al., 2024; Messias and Ferreira, 2015) and discussed the benefits of recreational *Vôlei Câmbio* (Borsatto, 2024), few studies have examined this sport from the perspective of the interdependent relationships established among its participants. In fact, the constant interaction among participants, collective adjustments during the game, and the way in which the group organizes its rhythms may indicate, for example, the presence of webs of interdependence, a concept developed by the sociologist Norbert Elias. In this regard, Norbert Elias's Configurational Sociology provides an appropriate theoretical framework for understanding how these relationships are formed and transformed through the networks of interdependence established among individuals (Elias, 1994).

According to Elias, each person's actions influence and are influenced by others', creating a continuous network of mutual influence. These relationships are neither static nor formally structured; rather, they are constantly reshaped through individuals' interactions as they cooperate, come into conflict, or simply coexist. It is within these "webs" of interdependence that human behavior acquires meaning, since no decision is entirely individual. People's choices are always shaped by the expectations and pressures arising from those with whom they interact. Therefore, observing a social practice such as a team sport also means examining how these connections are formed, strengthened, reshaped, and negotiated, ultimately influencing how individuals perceive themselves and organize their collective lives (Elias, 1994).

Given this context, an important question remains: who are the participants of *Vôlei Câmbio*, and how do the sociodemographic characteristics, experiences, and interactions of these individuals contribute to the formation, maintenance, and strengthening of interdependent relationships within the group? To address this question, a sociodemographic questionnaire can be used to characterize participants and their social contexts, while interviews can provide a deeper understanding of their experiences, perceptions, and the meanings they attribute to the relationships established through participation in *Vôlei Câmbio*.

Therefore, the present study aimed to characterize the sociodemographic profile of the participants in the Sesc Portão *Vôlei Câmbio* team in Curitiba, Brazil, and to understand how participation in this sport contributes to the development and strengthening of interdependent relationships among its practitioners. The research may contribute academically by providing a database containing the participants' sociodemographic characteristics, as well as their perspectives on the outcomes and benefits provided by the project, thereby enabling a better understanding of their experiences, engagement, and the project's effectiveness. In this regard, published studies have highlighted the importance of older adults' participation in sports activities from a sociocultural perspective, emphasizing aspects such as sociability and a sense of belonging throughout the aging process, thus demonstrating the social construction of later life (Kim et al., 2020).

Material & methods

This study is a qualitative, descriptive case study conducted with the *Vôlei Câmbio* program for adults aged 60 years and older at Sesc Portão in Curitiba, Brazil. The study was grounded in Norbert Elias's Configurational Sociology and was approved by the Research Ethics Committee of the Autonomous University Center of Brazil (UNIBRASIL) under approval number 8.328.43.

Participants

The sociodemographic survey included 32 *Vôlei Câmbio* participants from Sesc Portão, Curitiba, Brazil, aged 60 years or older. Initially, all participants completed a sociodemographic questionnaire. Subsequently, four volunteers participated in in-depth interviews, including two women and two men, as well as the instructor responsible for the program and the unit coordinator. All participants provided written informed consent prior to their participation in the study.

Instruments and Data Collection

Data were collected in three stages. In the first stage, the 32 participants completed a sociodemographic questionnaire consisting of nine closed-ended questions adapted from Hauser et al. (2020). The questionnaire collected information on age, sex, marital status, place of residence and living arrangements, educational level, occupation, income, and whether participants had children.

In the second stage, semi-structured interviews were conducted with four *Vôlei Câmbio* participants. The interview guide, comprising 22 questions, was developed based on the studies of Hauser et al. (2020), Ferreira (2012), and Kock (2025) and adapted to the objectives of the present study. The questions explored participants' sporting backgrounds, reasons for joining the *Vôlei Câmbio* program, interpersonal relationships, the development and strengthening of social ties, emotions and feelings associated with participation, family support, and the meanings attributed to the sport.

In the third stage, semi-structured interviews consisting of 10 questions were conducted with the instructor responsible for the *Vôlei Câmbio* program and the coordinator of the Sports Department at Sesc Portão. These interviews aimed to explore the program's objectives and to understand the professionals' perceptions of the sport's impact on participants' social interaction and relationship-building.

All interviews were audio-recorded with participants' permission and subsequently transcribed verbatim for analysis.

Data Analysis

The sociodemographic questionnaire data were organized in a Microsoft Excel® spreadsheet and analyzed using descriptive statistics. Absolute and relative frequencies were calculated to characterize the participants' sociodemographic profile.

The interview data were analyzed using Bardin's (2016) Content Analysis approach. The findings were interpreted through the lens of Norbert Elias's Configurational Sociology to understand the interdependent relationships, social configurations, and forms of interaction that developed among participants through their involvement in *Vôlei Câmbio*.

Results and Discussion

In this section, the findings are presented in two parts, each followed by its corresponding discussion. The first presents the sociodemographic profile of the 32 older adults participating in the *Vôlei Câmbio* program (Table 1), whereas the second provides a qualitative analysis of the perceptions of four older adult participants, the program instructor, and the program coordinator regarding the social relationships established through *Vôlei Câmbio*.

Table 1. Sociodemographic characteristics of the study participants (N = 32)

Variable	Category	n	%
Age group	60 - 69 years	15	46.88
	70 - 79 years	12	37.50
	80 years or older	5	15.63
Sex	Male	10	31.25
	Female	22	68.75
	Single	9	28.13
Marital status	Married	8	25.00
	Separated	1	3.13
	Divorced	6	18.75
	Cohabiting (Stable union)	3	9.38
Place of residence	Widowed	5	15.63
	Curitiba, Brazil	32	100.00
	Another city	0	0.00
Living arrangement	Living alone	18	56.25
	Living with family	14	43.75
	Other	0	0.00
Approximate monthly income	Up to 2 minimum wages (up to BRL 3,242.00)	11	34.38
	2-4 minimum wages (BRL 3,242.01-6,484.00)	12	37.50
	4-10 minimum wages (BRL 6,484.01-16,210.00)	7	21.88
	10-20 minimum wages (BRL 16,210.01-32,420.00)	2	6.25
	More than 20 minimum wages (above BRL 32,420.00)	0	0.00
Educational level	Illiterate	5	15.63
	Elementary education	4	12.50
	Secondary education	11	34.38
	Higher education	11	34.38
	Postgraduate education	1	3.13
Occupation	Retired	29	90.63
	Employed	2	6.25
	Pensioner	1	3.13
	Unemployed	0	0.00
Children	Yes	24	75.00
	No	8	25.00

Regarding age, the findings indicate that the program accommodates individuals across different stages of aging, including the oldest-old, an important characteristic in light of current recommendations for promoting active aging (WHO, 2023).

With respect to sex, women predominated (68.75%). From Bourdieu's (1983) perspective, this finding may be understood in terms of the socially constructed habitus, which tends to encourage greater female participation in collective settings focused on health promotion and social interaction.

Marital status showed a relatively heterogeneous distribution. Notably, more than half of the participants (56.25%) lived alone. This finding is particularly relevant when interpreted through the lens of Elias's Configurational Sociology (1994), which holds that individuals are embedded in networks of interdependence that evolve throughout the life course. Reduced day-to-day family interaction may increase the importance of sports programs as settings for developing and maintaining social ties, thereby creating new forms of belonging and mutual support.

From a socioeconomic perspective, more than two-thirds of the participants reported a monthly income of up to four Brazilian minimum wages (71.88%). These findings suggest that the *Vôlei Câmbio* program offered by Sesc primarily serves older adults from lower- and middle-income groups, expanding access to organized sport for individuals who may otherwise have limited opportunities to participate in private sports programs.

Regarding educational attainment, approximately one-third of the participants had completed high school, and a similar proportion had completed higher education. In contrast, 15.63% reported having no formal education, while 12.50% had completed only elementary education. From Bourdieu's (1986) perspective, this distribution reflects different levels of cultural capital among the participants. It is noteworthy that participation in sport may provide a shared social environment where individuals with diverse life trajectories interact through common experiences, fostering relationships grounded in cooperation and shared participation.

Regarding occupational status, the vast majority of participants (90.63%) were retired, consistent with the sample's age profile. Retirement represents an important transition in the reorganization of social relationships, as it reduces daily workplace interactions and may increase the risk of social isolation. In this context, Elias (1994) argues that social configurations are dynamic and continuously reorganized in response to changes experienced throughout life. Participation in sports programs may therefore represent a new configuration of interdependencies, capable of replacing or complementing social networks previously established in the work environment.

Another relevant finding concerns parenthood: three-quarters of the participants reported having children. However, having children does not necessarily imply regular daily interaction, particularly considering that more than half of the participants lived alone. In this context, participation in the *Vôlei Câmbio* program may play an important role in expanding social networks by providing opportunities for interaction, cooperation, and the development of meaningful social ties (Borsatto, 2024).

Overall, the sociodemographic findings indicate that the participants share characteristics commonly observed in programs designed to promote active aging. From the perspective of Norbert Elias's Configurational Sociology, this profile reinforces the understanding of sport as a privileged setting for the development and reorganization of networks of interdependence among older adults.

Interviews

The analysis of the interviews conducted with four *Vôlei Câmbio* participants, the program instructor, and the program coordinator at Sesc Portão, Curitiba, was organized into five analytical themes: sporting background and entry into *Vôlei Câmbio*; social relationships and interdependencies; emotions; the role of the Sesc organizational structure; and family and the meanings attributed to participation.

Although presented separately, these themes are closely interconnected and constitute a single social configuration shaped by the relationships among participants, professionals, family members, and the institution.

Sporting Background and Entry into Vôlei Câmbio

Participants reported diverse sporting backgrounds. Some had been involved in sports since their youth, whereas others became more physically active later in life. Entry into the *Vôlei Câmbio* program was primarily motivated by invitations from friends, previous experience with volleyball, an interest in ball sports, and the desire to improve health.

Participant 1 reported:

"At school, I used to play sports and then, when I was in my early fifties, I played a little volleyball. Then, when I turned sixty, I joined *Vôlei Câmbio*."

For another participant, joining the program resulted from an invitation:

"It was an invitation from a friend. [...] He was already playing here. He invited me, and I came."

Participant 3, in turn, described a longer sporting history and a relationship with Sesc spanning nearly three decades:

"In 1995, I started playing volleyball here, and I've never stopped. Nowadays, I play adapted volleyball five days a week, and besides that, I go dancing twice a week."

The interviewees associated *Vôlei Câmbio* with the need to remain active, improve their physical and psychological well-being, and cope with age-related limitations. This perception is consistent with the literature, which identifies the maintenance of health, functional capacity, quality of life, and social interaction as key factors motivating older adults to join and remain engaged in physical activity programs (Smith et al., 2023).

The instructor's account reinforces this understanding:

"Most of the participants come because of a doctor's recommendation, with advice to include physical activity in their routine to improve their health and quality of life."

However, the program coordinator emphasized that, although the physical benefits are important, social interaction becomes a central reason for continued participation:

"They come because of the sport, but also because of the friendships, the time they spend together, and so they don't have to stay home alone."

From the perspective of Norbert Elias, participation in sport, illustrated here by *Vôlei Câmbio*, cannot be understood solely as an individual choice. Rather, it takes place within networks of relationships involving friends, professionals, and medical recommendations. Guntowski et al. (2026) investigated the factors motivating participation in physical activity in a public park in Curitiba and found that 73% of participants engaged primarily to improve their health and quality of life. However, by joining a group-based sport, participants become part of a new social configuration, establishing networks of interdependence that may reshape their patterns of social interaction, sense of belonging, and sociability, in accordance with Elias's configurational perspective (1994, 1999). *Social Relationships and Interdependencies*

Social relationships emerged as a central theme across all interviews. Participants reported having developed friendships through *Vôlei Câmbio* and described relationships that extended beyond the sessions, including WhatsApp messages, social gatherings, trips, informal meetings, and mutual support during difficult times.

Participant 1 highlighted a friendship that had lasted for more than twenty years:

"There's Luiz. We talk on the phone and everything. He's been a friend for more than twenty years, and he plays here."

Participant 3 stated that most of the social relationships he had built in Curitiba originated within the group:

"Pretty much all the friendships I've made in Curitiba started here, and they continue to this day."

In addition to friendships, situations of mutual support were also identified.

Participant 2 reported that the group seeks to support those facing illness or other difficulties:

"We really support those who are sick or going through some kind of problem [...] and we always try to share positive things with each other."

The instructor also observed that these relationships extend beyond the volleyball court:

"They organize coffee gatherings, trips, family get-togethers, and they share important moments of their lives with one another."

Despite the value placed on friendship, the interviews also revealed tensions, particularly in competitive situations. From the perspective of Elias and Dunning (1992), such tensions are inherent to the dynamics of sport, as competition evokes intense emotions that remain regulated by the rules of the game and the norms governing social interaction.

Participant 4 reported that disagreements occasionally occur but are generally resolved quickly. The instructor confirmed this perception:

"From time to time, there are arguments or harsher comments driven by the desire to win and by the emotional involvement in the match. However, these situations usually stay on the court."

These findings demonstrate that the group constitutes a social figuration characterized by friendship, cooperation, and a sense of belonging, while also encompassing conflict and negotiation. According to Elias (1994), figurations are composed of networks of interdependence in which cooperation and tension continuously coexist. At the same time, these relationships contribute to the development of social capital, understood by Bourdieu (1980) as the resources associated with participation in durable networks of mutual relationships and recognition.

For Elias (1994), relationships of interdependence are not necessarily harmonious. Rather, they involve proximity, tensions, and shifting balances of power. Within the group investigated, disagreements do not weaken social bonds; instead, they constitute part of the ongoing process through which social relationships are negotiated and maintained.

Family and meanings attributed to the practice

All participants reported receiving encouragement from their families to continue practicing *Vôlei Câmbio*. This finding is consistent with the literature, which demonstrates that social support, especially from family and friends, is one of the most important factors in the adoption and maintenance of regular physical activity (Bauman et al., 2012). For older adults, this encouragement also supports motivation, adherence, and retention in physical activity programs, while contributing to strengthened autonomy, quality of life, and social relationships (Smith et al., 2023).

Participant 1 explained that her family members recognize the importance of the activity:

"They like that I play and encourage me to continue for as long as I can, because they know that I am doing an activity."

The coordinator highlighted that family participation also occurs during events, when family members attend the games and encourage the practitioners. Thus, the family becomes part of the network of relationships formed around the modality.

The interviewees attributed different meanings to *Vôlei Câmbio*. The practice was associated with friendship, health, enjoyment, quality of life, a sense of usefulness, and a desire to remain active.

Participant 2 stated:

"It represents a very important part of my life. I have already thought about stopping playing [...] but I realized that this would be harmful to me and I decided to return."

Participant 3 defined the modality as follows:

"It is my main sport and also a treatment for my health. It represents friendship, enjoyment, and quality of life."

Participant 4 presented a similar meaning:

"It represents everything. It is fun and works like a medicine for me."

For the professor, the modality strengthens older adults' self-confidence and sense of ability, helping them perceive that they remain capable of learning, competing, and overcoming challenges. The coordinator also highlighted that the practice helps expand social interaction, encouraging participants to leave their homes and face situations of loneliness.

From Elias's (1994) perspective, the meanings attributed to the practice are not constructed individually but emerge from the interdependence relationships established among participants. In this sense, perceptions of health, friendship, and quality of life express shared experiences constructed throughout coexistence within this configuration.

The results indicate, therefore, that *Vôlei Câmbio* goes beyond the dimension of a physical activity. It constitutes a space for social interaction in which participants build bonds, experience emotions, receive support, and attribute new meanings to aging. Thus, continuity in the practice is related to the set of interdependencies formed among the group, their family members, and the professionals involved in providing the modality.

Conclusions

The sociodemographic profile of the participants, characterized predominantly by women, retirees, and individuals with monthly incomes of up to four minimum wages, together with the finding that more than half of the participants lived alone or, after retirement, experienced changes in their social networks. In this context, sport plays an important role in the reorganization of social relationships, contributing to a sense of belonging, helping people cope with loneliness, and promoting more active aging.

From the perspective of Norbert Elias's Configurational Sociology, it was found that *Vôlei Câmbio* promotes the formation of social figurations in which friendship, cooperation, mutual support, and even conflicts are part of the same process of social interaction. The interviews showed that these relationships extend beyond the class environment, reaching social gatherings, trips, messaging groups, and support during difficult moments, demonstrating that interdependence networks remain active beyond the court.

Finally, it is important to highlight that this study has limitations, as it was conducted at a single Sesc unit and with a limited number of interviewees in the qualitative phase. Nevertheless, the results provide evidence that may support further research on *Vôlei Câmbio* and other sports modalities aimed at older adults, especially those with sociological foundations. It is expected that this study will contribute to expanding discussions on the role of sport in promoting health, social interaction, and social relationships during aging. For professionals and organizations working with older adults, this perspective suggests that program success should not be evaluated exclusively through physical or functional outcomes, but also through the quality of social interactions and relationships that emerge within the activity. Future studies could examine other *Vôlei Câmbio* groups and different sporting modalities, as well as longitudinally investigate how networks of interdependence develop and change over time.

Conflicts of interest - If the authors have no conflicts of interest to declare.

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