

Kinomichi, the therapeutic Aikido. A Systematic Review

Kinomichi, el Aikido terapéutico. Una revisión sistemática

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Abstract

Kinomichi is a movement art of Japanese origin based on the martial art of Aikido. It is based on the Japanese tradition known as Budo, which can be translated as a form of self-knowledge and personal development through martial practice. It was created by Aikido master Masamichi Noro (1935-2013) after a serious traffic accident in 1966. Noro adapted Aikido, minimised the physical demands and incorporated therapeutic exercises so that people with motor limitations could also practice it. Our aim is to analyse the therapeutic potential of Kinomichi by determining the Western therapies on which it is based. A systematic search of six databases was conducted using PRISMA (Preferred Reporting Items for Systematic Review and Meta-Analysis) guidelines. The search yielded 118 results, of which seven met the inclusion criteria ($n = 7$) and were found in the EBSCOHOST and Google Scholar databases. The Western therapeutic methods incorporated in the Kinomichi were the following ($n = 9$): Alexander Technique; Gindler Method; Ehrenfried Method; Kabat Method; Feldenkrais Method; Eutonia Method; Mézières Method; GDS-Godolieve Denys-Struyf Method and Antigymnastics Method. It justifies the need for quantitative experimental or quasi-experimental studies to verify the hypothetical benefits of Kinomichi as a therapeutic exercise.

Key words: Martial arts, neurorehabilitation, psycho-corporal techniques, somatic practices.

Resumen

El Kinomichi es un arte de movimiento de origen japonés basado en el arte marcial del Aikido. Se fundamenta en la tradición japonesa conocida como Budo, que puede traducirse como una forma de autoconocimiento y desarrollo personal a través de la práctica marcial. Fue creado por el maestro de Aikido Masamichi Noro (1935-2013) tras sufrir un grave accidente de tráfico en 1966. Noro adaptó el Aikido, minimizó las exigencias físicas e incorporó ejercicios terapéuticos para que también pudieran practicarlo personas con limitaciones motrices. Nuestro objetivo es analizar el potencial terapéutico del Kinomichi determinando las terapias occidentales sobre las que se sustenta. Se realizó una búsqueda sistemática en seis bases de datos siguiendo las directrices PRISMA (Preferred Reporting Items for Systematic Review and Meta-Analysis). La búsqueda arrojó 118 resultados, de los cuales siete cumplían los criterios de inclusión ($n = 7$) hallados en las bases de datos EBSCOHOST y Google Scholar. Los métodos terapéuticos occidentales incorporados en el Kinomichi fueron los siguientes ($n = 9$): Técnica Alexander; Método Gindler; Método Ehrenfried; Método Kabat; Método Feldenkrais; Método Eutonia; Método Mézières; Método GDS-Godolieve Denys-Struyf y Método Antigimnasia. Se justifica la necesidad de estudios experimentales cuantitativos o cuasi-experimentales para verificar los hipotéticos beneficios del Kinomichi como ejercicio terapéutico.

Palabras clave: Artes marciales, neurorehabilitación, técnicas psico-corporales, prácticas somáticas.



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Introduction

Kinomichi is based on the Japanese tradition known as Budo, which can be translated as a form of self-knowledge and personal development through martial practice. The term Kinomichi in Japanese is divided into three words: way (= michi), from (= no) and energy (= ki). In addition, among many other definitions that characterise it, it is called art of life, art of peace, original way or Japanese energetic technique that favours ki (understood as vital energy) (Hevin, 2014a).

Noro was a prominent Aikido master who in 1961 was stationed in France as the official delegate for Europe and Africa of the Aikikai Foundation, the Japanese governing body responsible for the development and popularisation of the martial art of Aikido (Murcia, 1996a; Pozarnik, 1984). Noro was involved in a very serious car accident in 1966 (Pozarnik, 1984). The impact with another vehicle caused him to suffer a clinical picture of numerous fractures in the thorax, with a perforated lung and several days in a coma. In addition, Noro suffered paralysis of the left hand and loss of sensation in the left upper body (Hevin, 2014a). The after-effects of the accident were so severe that he was forced to considerably reduce his activities and the frequency of his training courses (Roumanoff, 1992a). As a consequence of the accident, Noro was hospitalised for almost four months. After his release from the hospital, Noro started to do recovery exercises through private training with the help of another Aikido master, Katsuaki Asai (Hevin, 2014a). In this way, the dojo, a space for the practice and teaching of Aikido, became Noro's place of rehabilitation. During this period, between 1966 and 1979, Noro adopted a more open stance towards Aikido and met with Western therapists. Gradually, Noro incorporated aspects of European therapies into the organisational system of Aikido practices (Murcia, 1996b). The recognition of Kinomichi as an art independent of Aikido was consummated after an interview of Noro with Aikido master Kisshomaru Ueshiba (son of Aikido founder Morihei Ueshiba) in 1979. The 1990s and the first decade of the 21st century saw the development and expansion of Kinomichi outside France, adopting modern features while maintaining the essence of the Japanese tradition (Paoli, 2019). Noro passed away in 2013 after a long illness leaving his unfinished legacy to four of his disciples: Lucien Forni, Hubert Thomas, Jean-Pierre Cortier and Christian Bleyer (Institute Française du Kinomichi, undated-a).

There are several scientific studies that analyse the therapeutic application of Aikido (Ben-Soussan et al., 2019; Cuellar Hidalgo et al., 2019; Delva-Tauiiili, 1995; Foster, 1997; Lothes et al., 2013; Szabolcs et al., 2019; Szabolcs et al., 2021; Weiss et al., 2017). This therapeutic application of Aikido is projected in three distinct areas: firstly in the psycho-emotional domain of the adolescent or young students (Ben-Soussan et al., 2019; Cuellar Hidalgo et al., 2019; Delva-Tauiiili, 1995; Foster, 1997; Lothes et al., 2013; Szabolcs et al., 2019; Szabolcs et al., 2021; Weiss et

al., 2017); secondly, in the treatment of subjects with post-traumatic stress disorder (Weiss et al., 2017); and thirdly, in the therapeutic benefits of mindfulness during Aikido practice (Ben-Soussan et al., 2019; Cuellar Hidalgo et al., 2019; Lothes et al., 2013; Szabolcs et al., 2021; Szabolcs et al., 2019). The results of these studies do not show significant evidence for the use of Aikido as a therapeutic activity. In a way, studies on the therapeutic application of Aikido require further analysis from a cross-sectional and interdisciplinary perspective (Gómez-Lozano et al., 2023).

These results contrast with statements made by Lucien Forni in 2009, one of Noro's direct disciples. Forni argues that Kinomichi, as an evolution of Aikido, has therapeutic applications on a motor level thanks to its gentle stretching and extensive joint mobilisations. Conscious practice allows the body to relax and joint blockages to be eliminated, thus contributing to the improvement of physical and mental health. Its development has been carried out respecting the premises of Noro as well as its sporting, medical and pedagogical rules, in accordance with the French sporting code and ministerial guidelines governing Kinomichi practices (Hernandez, 2021).

Therefore, the aim of this study is to analyse the therapeutic potential of Kinomichi by determining the Western therapies on which it is based. To this end, a systematic review was carried out in academic and scientific databases and advanced search platforms, carrying out a descriptive statistical analysis of the Western therapies found in the review of the results found.

Method

Sources of information and search strategy

This systematic review was conducted following the 2020 Preferred Reporting Items for Systematic Review and Meta-Analysis (Page et al., 2020) statement from the start of the databases until 21 November 2023: Web of Science, PubMed, Scopus, Dialnet, EbscoHost and Google Scholar. For each of these databases, all possible combinations of the following search terms were used with the Boolean operator AND, namely: Kinomichi, Somatic Practices, Rehabilitation, Health or Therapies. The final combinations of these terms were: Kinomichi AND Somatic Practices; Kinomichi AND Rehabilitation, Kinomichi AND Health, Kinomichi AND Therapies. Due to the real need for the delimitation of the study objectives (Garnett et al., 2022), the search was supplemented through electronic repositories belonging to official Kinomichi Bodies (Institute Française du Kinomichi, undated-b; International Kishinryu Association, undated-a).

Eligibility criteria

Inclusion criteria (IC)

The following conditions were set for the studies: firstly they could be primary research sources of any kind (articles, book chapters, dissertations such as Master's theses or

Doctoral dissertations) published between the start of the databases and 30 November 2023 (IC1); the publication had to be specialised in the Art of Kinomichi (IC2); the writings could appear in any language, and would be translated into English where necessary, or in any language the authors considered (IC3); the full text had to be available (IC4); the study should also address a health issue of any kind in relation to the Kinomichi (IC5); and finally, an analysis of the theoretical and practical foundations of Western therapeutic methods incorporated into the construction of the Kinomichi should appear (IC6).

Exclusion criteria (EC)

In a first phase, given the contemporaneity of the term Kinomichi, officially recognised in 1979 (Pozarnik, 1984), there was no restriction as to the type of academic or scientific databases. Also, no date limitation or linguistic restriction was imposed on the search due to the specificity of our topic. In a second phase, after viewing the title, we excluded those studies that were informative or opinionated, without scientific methodological structure or contrastability criteria (EC1). In the third phase, when viewing the abstracts, Oriental Therapies or Philosophies were discarded, as they were not the object of our study (EC2). In the fourth phase, no EC were applied.

Study selection and data extraction process

Thus, the selection process was divided into 4 steps. First, all records retrieved from the databases were exported to Endnote Web, where duplicates were automatically removed. The next step was to merge all records into a single database. Next, two co-authors evaluated the titles and abstracts against the IC. Finally, the same co-authors reviewed the full text of the remaining records. At all stages, if there was disagreement between the two reviewers, a third reviewer made the final decision. The reference lists of all included studies were checked to ensure that no studies were omitted. The first author summarised the data from the included studies in a specially prepared Microsoft Word document. The following characteristics were extracted: author and year of publication, keywords, name records, type, founder and purpose of therapy. In addition, the therapists who had a direct relationship with Noro were recorded.

Study assessment of the risk of bias

The 'Quality Assessment Tool for Quantitative Studies' (Thomas et al., 2004) to assess the methodological quality of the included studies was not considered by the researchers. The tool consisted of six components: A) selection bias, (B) study design, (C) confounders, (D) blinding, (E) data collection methods, and (F) withdrawals, on a scale of 1 to 3, according to different questions related to each section. The Quality Assessment Tool dictionary (Thomas et al., 2004) was used to determine each score. Due to the qualitative, personal and experiential nature of the studies included, all values given for each of the components

would have been scored with a value of 4, which means not applicable. For this reason, it was considered inappropriate to analyse the scale in relation to our results for all of its components.

Synthesis methods

To identify the study design, the classification proposed by Thompson and Panacek (2007) was applied. The studies were classified as: a) cross-sectional study, b) case-control study, c) before-and-after study (retrospective), d) historical controls (retrospective), e) surveys/questionnaires, f) case series and g) case report.

Certainty assessment

The 2009 Oxford Center for Evidence-Based Medicine Levels of Evidence scale was used to determine the level of evidence for the included studies (Centre for Evidence-Based Medicine, undated). Two co-authors rated the studies at level five (lowest level of evidence). In case of disagreement, a third investigator would have made the final decision.

Results

Evolution of the filtering of results

This section may be divided by subheadings. It should provide a concise and precise description of the experimental results, their interpretation, as well as the experimental conclusions that can be drawn.

Following the application of the search term combinations, 118 results were obtained, of which 11 were duplicates of the assigned databases and were therefore eliminated. For the next steps, appropriate IC were used to select appropriate studies.

For the selection of titles, the search was restricted to any study of an experimental, trial, historical, review or conceptual approach nature that had contrasting primary reference sources and citations (IC1); for the selection of abstracts, the title was associated with the context of the Kinomichi study (IC2). According to these criteria and based on the first phase or section by title only, 20 studies were considered eligible.

During the abstract screening phase, no studies were excluded due to language unfeasibility or inaccessibility of the Full Text (IC3/IC4). Finally, 11 studies were discarded because the topic was not contextualised within the health field (IC5). In this phase, nine studies were selected according to these criteria. For the full text evaluation phase, the existence of an analysis of the foundations of Western Therapies or therapeutic practices that helped to construct the Kinomichi was verified (IC 6). After application of the IC, three studies were eligible for the systematic review ($n = 3$). All of them dealt with the type of Western Therapies that influenced Noro in the course of his Aikido practice both in the early stage from 1969 to 1979 and in later years. Of the three studies, being full-length books, we

selected only those chapters that met the IC6. The results obtained were seven book chapters ($n = 7$).

The PRISMA diagram outlines the process for focusing the field of study and the application of IC/EC to determine

the relevant studies that determine the background of Western Therapies employed in the construction of the Kinomichi style (Figure 1).

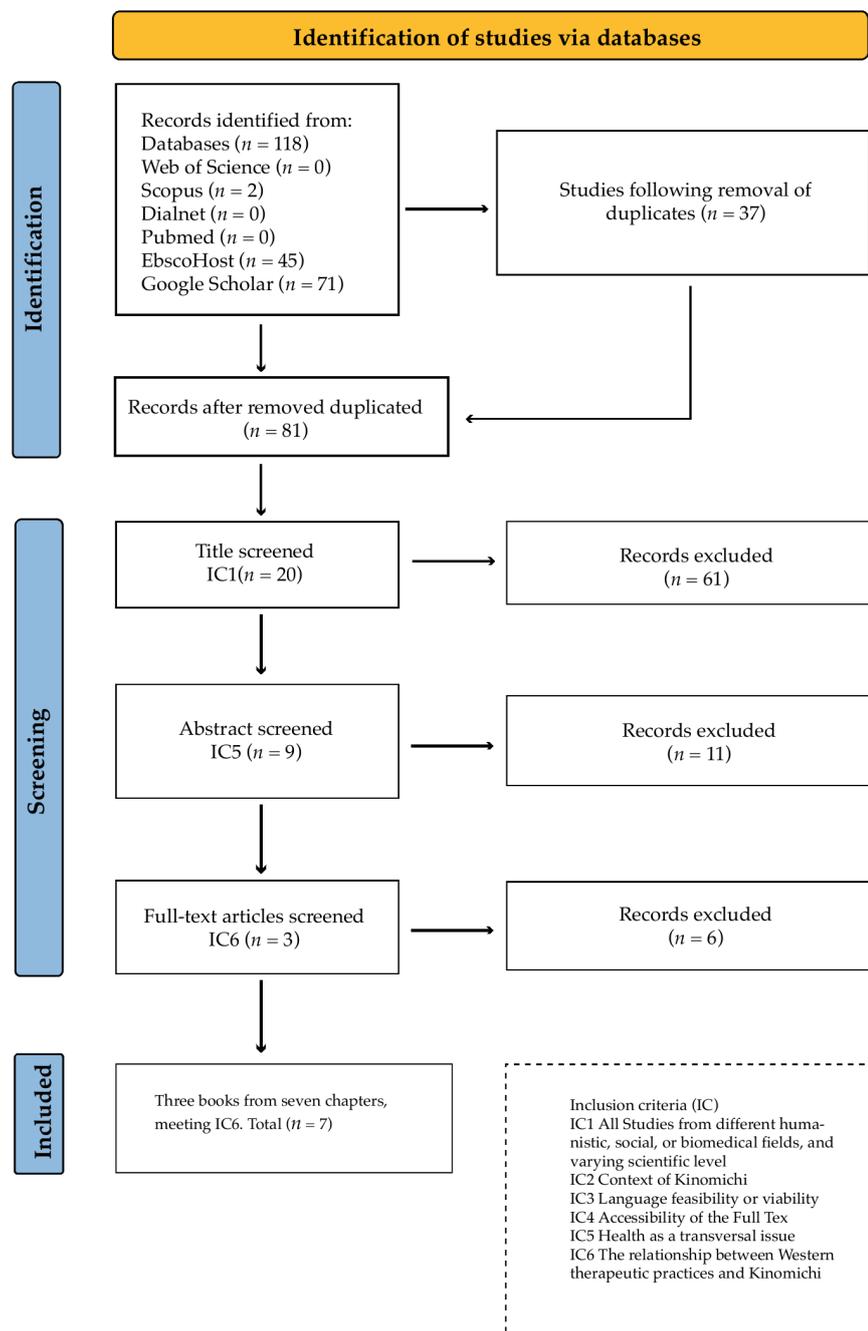


Figure 1. PRISMA (Preferred Reporting Items for Systematic Review and Meta-Analysis) flow diagram showing the selection process followed

Selection of studies

Figure 1 shows the extraction of a total of 118 studies, leaving 20 abstracts after removal of duplicates. Of these, nine were eligible for full text assessment after selection of the title and abstract. During the full text assessment, six records were excluded as they did not meet the eligibility criteria. Finally, after full text screening, three studies related to the

concept of Somatic, psycho-bodily or rehabilitative therapies in the field of Kinomichi (Hevin, 2014b; Murcia, 1996c; Roumanoff, 1992b) were included in the systematic review. As these studies are complete books, with chapters on different Kinomichi subthemes, IC6 was applied for the second time. Finally, seven results were obtained (Hevin, 2014a, 2014c; Murcia, 1996d, 1996e, 1996f; Roumanoff, 1992a, 1992c).

Characteristics of the selected studies

The studies included in the results were published between 1992 and 2014 (Table 1). No study describes any sample of participants who had followed Kinomichi training programmes ($n = 7$). However, all studies describe some theoretical-practical foundation of Western Therapies through direct experiences with the founder of the Kinomichi style. Furthermore, the studies unfold the contextual framework of those Western Therapies whose original purpose is postural re-education or neurorehabilitation (Table 3). The included studies indirectly or directly associate the Western Therapies described as

part of the pedagogical approach of the Kinomichi teaching programmes ($n = 7$) (Table 2 and 3). The bibliography in the framework of the results found is reduced to chapters found in specialised books (Table 1). The three authors are experts with direct experience and contemporaries of Master Noro. Raymond Murcia was Noro's collaborator and helped build the style (Murcia, 1996a). Bernard Hevin, who attended a lesson with Noro for the first time in 1967, after a period of injury due to a muscle tear caused by Karate practice (Hevin, 2014a). And finally, Daniel Roumanoff, a friend of Noro's, was one of the greatest experts on the union of Eastern and Western thought (Roumanoff, 1992d).

Table 1. Study authors and source of publication

Study	Authors (Year)	Book Title	Title of Chapter (C)/Section (S)	ISBN/ISSN	Language	Keywords (*)
1	Daniel Roumanoff (Roumanoff, 1992c)	The practice of Kinomichi with Master Noro	C-3. Les Découvertes du Débutant p.74-113	2-7413-0040.2	French	Permanent relaxation Natural body movement Tonic dialogue Bodily union Helical path Unlocking stretches Spiritual quest Vacuum Yin-yang
2	Daniel Roumanoff (Roumanoff, 1992a)	The practice of Kinomichi with Master Noro	C-Annexes S-2. Kinomichi et Thérapies p.289-339	2-7413-0040.2	French	Breathing together Heaven-Earth Energy work Psychomotor therapy Listening and welcoming attitude
3	Raymond Murcia (Murcia, 1996d)	Du mouvement à la création. Meeting with Masamichi Noro	C-4. Lès Étirements p.43-64	2-850076-806-5	French	Awareness of inner space. Spirals or spiroid movement Joint and muscle chains Globality Elongation without compensation 5 Chinese elements: earth, metal, water, wood and fire. Earth-to-sky connection Harmonious encounter
4	Raymond Murcia (Murcia, 1996e)	Du mouvement à la création. Meeting with Masamichi Noro	C-5. Le Contact p.65-82	2-850076-806-5	French	Psychological work Emotional tone Effective manual contact Intense tonic organisation and balancing activity Self-realisation Earthworks
5	Raymond Murcia (Murcia, 1996f)	Du mouvement à la création. Meeting with Masamichi Noro	C-6. Terre-Ciel et Verticale p.83-93	2-850076-806-5	French	Sky movements Fixed point Yang Yin Anti-gravity organisation Duality in unity Dance form
6	Bernard Hévin (Hevin, 2014a)	The chef-d'oeuvre of Master Masamichi Noro. A martial art without combat.	Première partie: Un peu d'Histoire p.15-68	979-10-242-0049-1	French	Silent perception A practice to refine the feeling. Gentle gymnastics The anti-martial-art Shin o kokoro (alignment of the mind with the heart)
7	Bernard Hévin (Hevin, 2014c)	The chef-d'oeuvre of Master Masamichi Noro. A martial art without combat.	Deuxième partie: Les Concepts Fondamentaux. p.69-110 S-Les étirements p. 95-103	979-10-242-0049-1	French	Energy release Hygiene of life Harmonic relationship Body and spirit Ki management Energy economics Psychic balance

* Keywords found for each of the results around the semantic field of the psychosomatic relationship in the Kinomichi.

Authors, publication sources and extraction of study variables

Table 1 lists the seven studies that develop theoretical-practical tests on the foundations of Western therapeutic practices used in Noro's incorporation of Aikido. These Therapies, mainly of European origin, are present from the beginning of the process of transformation of Aikido until the recognition of the Kinomichi in 1979. All these practices revolve around the teachings of their founder Noro (Hevin, 2014a, 2014c; Murcia, 1996e, 1996d, 1996f; Roumanoff, 1992a, 1992c).

Table 2 shows the records found for Western Therapies ($n = 9$). In the seven selected studies, Western Therapies are recorded with a total frequency of 30 occurrences in total (100%): Alexander Technique (10%); Gindler Method (6.66%); Ehrenfried Method (20%); Kabat Method (3.33%); Feldenkrais Method (10%); Eutonia Method (20%); Mézières Method (10%); GDS-Godolieve Denys-Struyf Method (6.66%) and Antigymnastics Method (10%). The Dürckheim Method (10%) should also be noted.

Table 2. Recorded Western therapies whose concepts, principles and strategies were incorporated into the development of the Kinomichi

N = 9	Western Therapies (Founders)	N = 30 (absolute frequency*)	Authors (Year)						
			Daniel Roumanoff (1992c)	Daniel Roumanoff (1992a)	Raymond Murcia (1996d)	Raymond Murcia (1996e)	Raymond Murcia (1996f)	Bernard Hévin (2014a)	Bernard Hévin (2014c)
1	Mézières Method: (Françoise Mézières)	3 (10%)	X		X		X		
2	Anti-gymnastics method (Thérèse Bertherat)	3 (10%)			X			X	X
3	Eutonia Method (Gerda Alexander)	6 (20%)	X	X	X	X	X		X
4	Gindler Method (Elsa Gindler)	2 (6.66%)		X				X	
5	Ehrenfried Method (Lily Ehrenfried)	6 (20%)	X	X	X		X	X	X
6	Kabat Method (Herman Kabat & Margaret Knott)	1 (3.33%)			X				
7	Feldenkrais Method (Moshe Feldenkrais)	3 (10%)	X		X				x
8	Alexander Technique (Friedrich Mathias Alexander)	3 (10%)	X		X		X		
9	GDS method (Godolieve Denys-Struyf)	2 (6.66%)			X		X		

* Absolute frequency of presence of Western Therapies found in each of the results.

Table 3 lists variables directly related to the founders, original fields of research, degree of therapeutic identification, purpose and direct relationship of therapists with the creation of the Kinomichi. In the original field of research, the training of the founders in Education, Psychology, Sports Medicine, Kinesiotherapy/

Physiotherapy and Osteopathy stands out. The terms found that identify the types of Therapies that influenced Noro were: Psychomotor Therapy; Somatic Therapy; Gentle, Sweet or Holistic Gymnastics; Neurohabilitative Therapy, Body Psychotherapy and Conscious Technique of self-observation.

Table 3. Western therapies, founders, types, purpose and direct practitioners with Masamichi Noro

Western Therapy	Founder / Research field	References Authors	Type of Therapy Name	Degree of Identification (*)	Purpose	Therapists/ Practitioners directly with Masamichi Noro in the Dojo from the focus of each Therapy
1 Mézières Method Stretching technique through the concept 'Muscle Chains'.	Françoise Mézières (Hanoi 1909- Paris 1991) Physiotherapy / applied kinesiotherapy	Raymond Murcia (Murcia, 1996d) (Murcia, 1996f)	Psycho-Motor Therapy	4	To become aware of muscular tensions, to promote states of relaxation and to discover the body's energetic pathways for healing.	Gisèle de Noiret & Marie-Thérèse Foix (French Physiotherapists of the Mezierist School)
			Somatic Therapy Gentle/Sweet/	3		
			Holistic Gymnastics Neurorehabilitation Therapy	2		
			Body Psychotherapy	5		
			Conscious self-observation technique	4		
				2		
2 Godelieve Denys-Struyf Method (GDS) Stretching technique through the concept of 'Articulo-muscular chains'.	Godelieve Denys-Struyf (Belgian Congo 1931-Malines 2009) Physiotherapy/ kinesiotherapy and applied osteopathy	Raymond Murcia (Murcia, 1996d) (Murcia, 1996f)	Psychomotor therapy	4	Preventing, maintaining and treating psycho-corporal imbalances	Gisèle de Noiret & Marie-Thérèse Foix (Godelieve Denys-Struyf direct disciple of Françoise Mézières 1972-1973)
			Somatic Therapy Gentle/Sweet/	1		
			Holistic Gymnastics Neurorehabilitation Therapy	2		
			Body Psychotherapy	5		
			Conscious self-observation technique	5		
				2		
3 Ehrenfried Method	Dr Lily Ehrenfried (Wroclaw, 1896 - Paris, 1994), Sports medicine	Daniel Roumanoff (Roumanoff, 1992c) (Roumanoff, 1992a) Raymond Murcia (Murcia, 1996d) (Murcia, 1996f) Bernard Hévin (Hévin, 2014a) (Hévin, 2014c)	Psychomotor therapy	4	Promote greater body awareness and spontaneous movement to achieve a holistic balance of the human being and posture.	Dr Lily Ehrenfried Françoise Paumard
			Somatic Therapy Gentle/Sweet/	1		
			Holistic Gymnastics Neurorehabilitation Therapy	5		
			Body Psychotherapy	1		
			Conscious self-observation technique	5		
				5		
4 Anti-gymnastics Method by Thérèse Bertherat	Thérèse Bertherat (Lyon 1931- 2014) Physiotherapy/ kinesiotherapy	Raymond Murcia (Murcia, 1996d) Bernard Hévin (Hévin, 2014a) (Hévin, 2014c)	Psychomotor therapy	4	To assist in the holistic restoration of bodily function, emphasising the importance of coordination and interconnection of all parts of the body.	Gisèle de Noiret & Marie-Thérèse Foix Thérèse Bertherat
			Somatic Therapy Gentle/Sweet/	4		
			Holistic Gymnastics Neurorehabilitation Therapy	5		
			Body Psychotherapy	1		
			Conscious self-observation technique	5		
				5		
5 Gindler Method Psychotherapy Body	Elsa Gindler (Berlin 1885 - Berlin 1961) Physical Education	Daniel Roumanoff (Roumanoff, 1992a) Bernard Hévin (Hévin, 2014a)	Psychomotor therapy	3	Promote body awareness, sensitivity to improve health and prevent psychosomatic imbalances.	Dr Lily Ehrenfried was a direct disciple of Elsa Gindler. Ehrenfried Method is influenced by Elsa Gindler.
			Somatic Therapy Gentle/Sweet/	5		
			Holistic Gymnastics Neurorehabilitation Therapy	5		
			Body Psychotherapy	1		
			Conscious self-observation technique	5		
				4		

6	Eutonia Method	Gerda Alexander (Wuppertal 1908-1994) Education and psycho-corporal therapy	Daniel Roumanoff (Roumanoff, 1992c) (Roumanoff, 1992a)	Psychomotor therapy	1	Body awareness to regulate muscle tension among other central nervous system functions to improve neuromuscular efficiency.	Dr Lily Ehrenfried with influence of Gerda Alexander in her psychocorporal approach Raymond Murcia is a disciple of Gerda Alexander. Murcia is a Eutony Therapist and helped Masamichi Noro to set up the Kinomichi.
			Raymond Murcia (Murcia, 1996d) (Murcia, 1996e) (Murcia, 1996f)	Somatic Therapy Gentle/Sweet/ Holistic Gymnastics Neurorehabilitation Therapy Body Psychotherapy Conscious self-observation technique	5 2 5 5		
			Bernard Hévin (Hévin, 2014c)				
7	Feldenkrais Method	Moshe Feldenkrais (Slavut 1904 - Tel Aviv 1984) Sports medicine	Raymond Murcia (Murcia, 1996d)	Psychomotor therapy Somatic Therapy Gentle/Sweet/ Holistic Gymnastics Neurorehabilitation Therapy Body Psychotherapy Conscious self-observation technique	4 5 4 3 5 5	Awareness of specific movements to take advantage of the plasticity of the nervous system, improving and securing neuromuscular efficiency.	The Feldenkrais Method influenced the French physiotherapy in the 70s and 80s, which embraced this method and collaterally influenced previous routines in the Kinomichi. We do not find in the results the link that Masamichi Noro and Moshe Feldenkrais had.
			Bernard Hévin (Hévin, 2014c)				
8	Matias Alexander	Frederick Matthias Alexander (Tasmania 1869-Sidney 1955) Actor, Health	Daniel Roumanoff (Roumanoff, 1992c)	Psychomotor therapy Somatic Therapy Gentle/Sweet/ Holistic Gymnastics Neurorehabilitation Therapy Body Psychotherapy Conscious self-observation technique	4 5 2 3 5 5	To help people overcome posture and movement problems, reduce pain and stress, and improve their overall well-being.	The perspectives between the adaptive mechanisms in the postural axis are transferred to the relational perspective of the Kinomichi between Heaven and Earth. This correlation between techniques is pointed out by Daniel Roumanoff (1992) and Raymond Murcia (1996)
			Raymond Murcia (Murcia, 1996d) (Murcia, 1996f)				
9	Kabat Method Proprioceptive Neuromuscular Facilitation-PNF Method	Herman Kabat (Brooklyn 1913-1995) Neurophysiology	Raymond Murcia (Murcia, 1996d)	Psychomotor therapy Somatic Therapy Gentle/Sweet/ Holistic Gymnastics Neurorehabilitation Therapy Body Psychotherapy Conscious self-observation technique	2 1 1 5 1 3	Promote motor responses through sensory stimulation in order to recover and improve motor function.	Margaret Knott & Dorothy Voss, helped to develop the method. It is the basis of the neurophysiology of the mechanisms incorporated into the body contact work in the Kinomichi. It was Raymond Murcia who brought this perspective of neurorehabilitation to the field of study of the Kinomichi.

* Degree of identification based on the type of description used in the results for each of the Western Therapies based on a 5-point Likert scale (1- Very weak identification 2- Weak identification 3- Moderate identification 4- Strong identification 5- Very strong identification) (Chomeya, 2010).

Typology of selected studies

The studies correspond to seven book chapters describing the influence of Western Therapies implemented in the dojos, Japanese martial arts practice spaces, in the city of Paris between 1969 and 1985 (main period in the construction of the Kinomichi) (Murcia, 1996a). The seven studies found are essayistic and retrospective in nature in relation to the construction of the Kinomichi: case report, according to the classification of Thompson and Panacek (2007).

Discussion

The aim of this study is to analyse the therapeutic potential of Kinomichi in relation to the Western therapies on which it is based. The therapeutic benefits of Aikido, the martial art from which Kinomichi originates, have been studied relatively late when compared to Karate or Judo (Pulido et al., 2021). Variables such as frustration tolerance, aggressiveness and self-control in Aikido were not studied until 1995 (Delva-Tauiiili, 1995). Two years later, Foster's study (Foster, 1997) examined variables such as self-esteem, anxiety and anger. Aikido has even been included in treatment programmes for patients with post-traumatic stress disorder (PTSD) (Weiss et al., 2017). But it is mindfulness that has been the most relevant aspect of the studies (Ben-Soussan et al., 2019; Cuellar Hidalgo et al., 2019; Lothes et al., 2013; Szabolcs et al., 2019; Szabolcs et al., 2021) on aikido in the last decade (Muñoz Arroyave et al., 2023). Kinomichi shares the same Taoist or Zen heritage as Aikido, although it received a strong Western influence during its consolidation process until 1979 (Murcia, 1996a). This allowed Noro, the creator of Kinomichi, to broaden the perspective of traditional Japanese martial arts beyond the borders of Japan. Elements of Central European culture (Roumanoff, 1992a) are integrated into Kinomichi with the incorporation of defining features of Western therapies (Table 3).

The results show that a total of nine types of Western therapeutic methods have influenced the development of Kinomichi: Gindler Method; Ehrenfried Method; Feldenkrais Method; Eutonia Method; Mézières Method; Antigimnasia Method; GSD-Godelieve Denys-Struyf Method; Kabat Method (FNP); and Alexander Technique (Table 3).

The Ehrenfried Method (20%) and Eutonia (20%) are the Western therapies with the most records in the Kinomichi configuration. The Ehrenfried method has its origins in German body psychotherapy from the Gindler method (6.6%) (Table 2). In other words, 26.6% of the Kinomichi's therapeutic influence is directly influenced by body psychotherapy. In a second case, Eutonia provides one of the main foundations of Kinomichi in the relationship of muscle tone during body contact between practitioners (Murcia, 1998). Raymond Murcia (1931-2015) was a close collaborator of Noro, a direct student of Gerda Alexander and a trainer of Eutonia (Table 3).

Furthermore, the Mézières method becomes a very influential discipline in Aikido's new pedagogical approach to Kinomichi. This is due to the influence of two French physiotherapists, Gisèle de Noiret and Marie-Thérèse Foix, who work directly with Noro. Both physiotherapists are transmitters of the Mézières method, as well as collaborators and students of Thérèse Bertherat, founder of the Antigymnastique, and Lily Ehrenfried, creator of the Ehrenfried method (Hevin, 2014a).

Of the nine Western therapies, only two (22.2%) of their founders had a direct personal or professional relationship with Noro: Lily Ehrenfried, creator of the Ehrenfried Method, and Thérèse Bertherat (1931- 2014) of the Antigymnastique Method (Table 3).

Although there are no studies demonstrating the therapeutic possibilities of the Kinomichi, there is an extensive bibliography (Areeudomwong et al., 2017; Carl, 2013; Díaz-Arribas et al., 2015; Gain-Duval, 2020; Little et al., 2014; Niaradi et al., 2022a; Paolucci et al., 2018; Paolucci et al., 2017; Young et al., 2015). The therapeutic possibilities of the nine Western therapies on which it is based have been recognised (Hevin, 2014a, 2014c; Roumanoff, 1992a, 1992c).

Mézières Method

Françoise Mézières (1909-1991) is the therapist who gave her name to the Mézières method. Mézières defended the idea of the existence of intertwined sets of poly-articular muscles whose characteristics are their strength and, above all, the mobility of the compensations (Mézières, 1984). Mézières also described a tendency to shorten the so-called "spinal erector muscles" with a tendency to retraction and the origin of musculoskeletal pain (Nisand, 2010). Mézières defined the concept of 'muscle chains' as an indivisible unit or globality (Gain-Duval, 2020; Paquette, 2020). The Mézières method has been shown to have superior effects on chronic low back pain (Alfonso-Mora et al., 2023; Lena et al., 2022; Savage, 2020) with associated improvement in interoceptive perception of mobility (Alfonso-Mora et al., 2023) and with improvement in temporomandibular joint function (Savage, 2020).

GDS-Godelieve Denys-Struyf Method

Godelieve Denys-Struyf (1931-2009), a student of Mézières in Paris in 1972 and 1973, contributed to this therapeutic current with the concept of "article-muscular chains" developed in the 1970s and known as the GDS method (Denys-Struyf, 2005). The GDS method is a motor control intervention that classifies the muscles that influence lumbopelvic and spinal stability into six groups of muscle chains according to their anatomy and function in posture and movement. Denys-Struyf is based on the assumption that the balance between these muscle chains contributes to proper neuro-muscular, biomechanical and psychomotor control, whereas unbalanced tension between them is the cause of subacute or chronic low back

pain (Díaz-Arribas et al., 2015). The Godelieve Denys-Struyf method, a reconceptualisation of the Mézières method, has been used specifically in the treatment of chronic low back pain as a postural rehabilitation exercise (Paolucci et al., 2018) and has been shown to reduce low back pain (Díaz-Arribas et al., 2015; Grotle et al., 2022; Lombardo et al., 2023) in both lumbar disc herniation (Grotle et al., 2022) and lumbar disc degeneration (Lombardo et al., 2023).

Ehrenfried Method

Body psychotherapy has its origins in psychoanalysis and the gymnastics and dance reform movements of the early 20th century (Loukes, 2006). The Ehrenfried Method emerged from this reform movement (Geuter, 2015). The Ehrenfried Method belongs to the line of psychocorporal therapies (Geuter, 2015). Dr Lydia Ehrenfried was one of the first teachers to train with Gindler (Machado et al., 2006; Mullan, 2016). The lineage of the Ehrenfried Method has also influenced integrated psychotherapy methods such as that of Hilarion Petzold. Its scope, like that of the Gindler Method, could be applied to complementary therapies for patients who have undergone traumatic experiences (Weiss et al., 2017). Both the Gindler Method and the Ehrenfried Method would develop self-regulation strategies in the individual to achieve a state of connectedness and safety during interactions, such as co-regulation or physical connections that trigger safety responses and enable non-threatening social interactions. (De Baets & Van Praet, 2023).

Antigymnastics Method

Thérèse Bertherat is the creator of the Méthode Antigymnastique and a student of Françoise Mézières in 1972. Bertherat explains that the Mézières method contradicted her previous training because it was a natural method that required the patient to be aware of his body and to cooperate fully (Hade-Héту, 1978). In addition to its curative effect, the Méthode Antigymnastique allows the restoration of a neurovegetative balance, a reharmonisation of the body schema and promotes an awareness of somatisation (Gain-Duval, 2020). The Méthode Antigymnastique is a method whose scope of application has only been scientifically proven in the field of somatic awareness in variables such as well-being and a self-perception of personal improvement (Gomez, 1988).

Gindler Method

The Gindler Method was developed by Elsa Gindler (1885-1961). Gindler's work was based on the 'gymnastics' or calisthenics methods of Friedrich Ludwig Jahn (1778-1853). Gindler's recognised body psychotherapy was called Work on the Human Being. Gindler is considered the forerunner of psychoanalytic therapies such as Gestalt therapy (Gregory & Robine, 2004); Reichian vital energy theory; Lowen's bioenergetic therapy (Geuter et al., 2010; Rothe, 2014); or 'Concentrative Movement Therapy' (Carl, 2013). Gindler was also a pioneer in the development of

therapeutic concepts such as Ruth Cohn's Theme-Centred Interaction or Charlotte Selver's Sensory Awareness Method (Brooks, 1966). In the late 1920s and 1930s, Elsa Gindler (1885-1961) developed a breathing method (Buchholz, 1994; Oberem, 2016) as part of a holistic body psychotherapeutic approach (Eddy, 2009), the scope of which could be applied to complementary therapies in the treatment of patients with post-traumatic stress disorder (PTSD) (Weiss et al., 2017).

Eutonia Method

The Eutonia Method was developed by Gerda Alexander (1908-1994) in the 1930s, using a key concept from her work on efficient muscle tone. Gerda was a therapist considered to be a first generation somatic pioneer (Eddy, 2009). Eutonia seeks to balance the tension and relaxation of everyday activities by promoting body awareness. The Eutonia method is based on listening to the relationship between body tone and a corresponding internal vagal tension dialogue. The neurophysiological basis of the regulation of the individual is based on the functioning of the parasympathetic system and the vagal function (Porges, 2021). For its part, the Eutonia method has been used to improve the perception of quality of life (Niaradi et al., 2022a, 2022b) or postural re-education in adolescents. It has also been used to improve phoniatrics (Murcia, 1991) and in the treatment of neurodegenerative diseases such as fibromyalgia (Maeda et al., 2006).

Feldenkrais Method

The concept was developed and created by Moshe Feldenkrais (1904-1984) as a method of self-development and a new approach to the body during a rehabilitation period after a knee injury while practising judo (Eddy, 2009). The Feldenkrais Method has been developed in mindfulness work (Mattes, 2016; Wallman-Jones et al., 2023) or the level of psychological well-being (Wallman-Jones et al., 2023) in older people (Broome et al., 2015).

Alexander Technique

Friederich Mathias Alexander (1869-1955) developed a method of voice re-education based on the concept of the psychophysical encounter of the self with the physical re-education of the movement dynamics of the axial skeleton. He was also a somatic pioneer. Mathias Alexander exported his technique to Europe (Eddy, 2009). The Alexander Technique has been used in the reduction and prevention of low back pain (Cacciatore et al., 2005; Hafezi et al., 2022; Little et al., 2014) in relation to the expression of emotions through body touch (Jones & Glover, 2014); and in relation to the improvement of symptoms of depression in Parkinson's patients (Stallibrass et al., 2002) by promoting self-confidence (Aldridge, 2019).

Kabat Method

The Kabat Method is based on the concept of proprioceptive neuromuscular facilitation developed by Dr

Herman Kabat (1913-1995) and physiotherapist Margaret Knott (1918-1978). The method is based on a deep understanding of the neurophysiology and kinesiology of human movement, based on stimulation and response patterns for the treatment of patients (Adler et al., 2003). The main principle of the Kabat method is proprioceptive neuromuscular facilitation (PNF). It uses the property of muscle sensation or proprioception (Voss, 1967). It is defined as a method that uses superficial (tactile) and deep (joint position, tendon and muscle stretch) information to stimulate the nervous system, which in turn causes the muscles to act (Murcia, 1996d). The Kabat Method has been used as a treatment to improve the symptoms of cervicalgia of degenerative joint origin (Maicki et al., 2017); chronic low back pain of various origins (Areeudomwong et al., 2017; Ling-Xin et al., 2022; Young et al., 2015), which is one of the leading causes of disability worldwide (Areeudomwong et al., 2017; Young et al., 2015). It has also been shown to improve the quality of life of stroke survivors (Guiu-Tula et al., 2017) and to prevent serious pathologies by treating overuse injuries in athletes or dancers (Hoogenboom & Voight, 2015).

Final considerations

The profession of physiotherapist is the same as that of kinesiologist (Kine) or massage kinesiologist (MK) in the French Republic. The French term is 'Kinésithérapeute' (Paquette, 2020). The scope of practice of a kinesiologist includes a variety of techniques and approaches such as massage, mobilisation or kinesiotherapy, taping, muscle chain stretching, cryotherapy and electrotherapy. Kinomichi addresses specific areas of intervention using techniques such as mobilisation or kinesiotherapy and muscle chain stretching, and shares these elements with kinesiotherapy or conventional physiotherapy.

Through the Mézières Method, Françoise Mézières pioneered a school of disciples within the French kinesiotherapy movement. Her approach, based on the global concept of muscle chains, conceived in 1947, stands out in the field of holistic rehabilitation (Mézières, 1984).

Godolieve Denis-Struyf, a student of Mézières in 1972-1973, introduced the concept of joint chains as well as muscle chains (Denys-Struyf, 2005). In addition, Denis-Struyf incorporated the principles of proprioceptive facilitation developed by Herman Kabat and Margaret Knott in the 1940s and later completed by Dorothy Voss in 1954, adding the word neuromuscular (Hernández & Pérez, 2015).

Lydia Ehrenfried, through her method, and Thérèse Bertherat, through the Antigymnastique method, transmitted the principles of the Mézières method, in particular the spiral stretching of the muscle chains, to the methodology of Master Noro (Murcia, 1996d). The decisive contribution of the French physiotherapists Gisèle de Noiret and Marie-Thérèse Foix, both students of Noro for a long time in his dojo, marks a milestone in the evolution of practices such as Aikido towards Kinomichi (Murcia, 1996e).

Kinomichi is based on the reunion, mostly in pairs, with a natural, efficient movement and without unnecessary tension between the two practitioners. In this sense of neuromuscular repatterning (Gómez-Lozano, 2023; Krasnow, 1997; Krasnow et al., 1997; Krasnow et al., 2001), the nine therapeutic methods are designed to stimulate the ventral pathway of the vagus nerve, according to the polyvagal theory. This theory postulates that the vagus nerve is divided into three branches: ventral, dorsal and metabolic. The ventral pathway, associated with social connectedness and emotional regulation, is activated when we experience safety and connectedness, promoting relaxation and bonding responses (Porges, 2021).

Western therapies would aim to enhance the adaptive response of Kinomichi practitioners (in an agreed practice, the 'uke' receives the attack while the 'tori' executes the technique). The additional therapeutic benefits of this practice, usually in pairs, can lead to a significant improvement in interpersonal communication, harmony and psychophysical balance of the individual.

Conclusions

Although there is no scientific evidence that Kinomichi has been used therapeutically in studies, we have well-founded reasons to support it has significant therapeutic potential. Areas of intervention could include: improving mindfulness, preventing and treating pain and injury, improving quality of life for people with degenerative diseases and the elderly. It could also be used as a complementary therapy for anxiety, depression or general behavioural disorders and therefore has considerable potential as a psychosomatic therapy.

It justifies the need for quantitative experimental or quasi-experimental studies to ascertain the potential benefits of Kinomichi.

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