UNIVERSITÀ DEGLI STUDI
DI GENOVA

Università degli Studi di Genova

Scuola di Scienze Mediche e Farmaceutiche

Dipartimento di Neuroscienze, Riabilitazione, Oftalmologia, Genetica e Scienze Materno-Infantili

Master in Riabilitazione dei Disordini Muscoloscheletrici

A.A. 2015/2016

Campus Universitario di Savona

Does musculoskeletal patients' satisfaction depends on contextual factors as much as on the efficacy of therapy?

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ABSTRACT

Introduction in the last years there has been a strong interest toward patients' satisfaction and what factor influence patients' perception of care. In previous systematic review the interpersonal attributes of physical therapist and the process of care emerged as key determinant of patients'satisfaction regard the physiotherapy in outpatient setting for musculoskeletal complaints.

Methods a systematic review of qualitative studies combined both qualitative metasummery and metasynthesis was completed using Sandelowski and Barroso's guidelines. The reporting was performed in accordance with the PRISMA statement and ENTREQ. Six databes were screened: MEDLINE (via Pubmed), CINAHL, Web of Science, Scopus, Wiley Online Library, Embase. Keywords used concerning: patient's satisfaction, outpatient setting, physiotherapic treatment. Moreover a berry-picking method was adopted to improve search strategy.

Results 13 studies was included in qualitative metasynthesis. Initial coding of included studies resulted in 77 codes, which were condensed to 14 categories and lastly organized into six themes. These themes were: clinical outcome, physiotherapist features, patient features, physiotherapist-patient relationship, treatment features, healthcare setting features. Globally, they contributed to compose the patient's satisfaction towards physiotherapy performed in outpatient setting.The most frequent categories were: organization of care, education/sharing of information, attitude/behaviour of the physiotherapist.

Discussion our finding suggested satisfaction as a multidimensional concept influenced by clinical outcome and other factors such as patient and physiotherapist features, treatment features, patient and physiotherapist relationship and healthcare setting features according to previous research. These other factors that tend to affect patient's satisfaction are similar to what literature about placebo defined as contextual factors.

Conclusion further researchers is needed to examine dissatisfaction, specific weight of each contextual factors related to satisfaction with care and how each one may influence patient's perception of quality care. Physiotherapists should reflect and interrogate themselves about what they could change in their clinical practices to enhance patient's satisfaction and they should acknowledge the potential to modulate contextual factors to enhance patient's experience. Our suggest is that a specific formation is needed in these aspect to achieve positive outcome, especially management, communication and psychological competences.

SUMMARY

1. Introduction

In the last years, there has been a strong interest towards the patient-reported outcomes measures (PROMs)[1] and the active engagement of patient in the health system.[2] PROMs are data directly reported by patients designed to evaluate structure, process and outcomes of care from the patient's perspective.[3] Among these, the patient satisfaction was considered a right to health indicator.[4]

Patient satisfaction concerns a complex, implicit, subjective and multidimensional construct.[5] It involves cognitive, affective and emotional processes[5] through which patients evaluate the congruence between the health experience and their need, value, desire and expectation.[6, 7] The higher is the congruence, the greater results the satisfaction.[8, 9] Due to multifactorial nature, different elements influence patient satisfaction with medical treatment such as technical care, interpersonal care, physical environment, access, organizational characteristics, continuity of care, and outcome of care,[10] but the results are still under debate.[9, 11, 12]

At multiple levels stakeholders, organizations and governments adopted the patient satisfaction as a key indicator to measure the appropriateness, efficacy, quality and feasibility of healthcare services.[13-15] This proxy helps to: identify problems, improve quality and management of healthcare services, ameliorate health professionals' behaviors, define appropriate policies and allocate economic resources.[4, 16, 17] Moreover, it contributes to maintain the attractiveness of a hospital, guiding the patient to choose, return and recommend a specific service, improving the compliance towards treatment and follow-up.[18-20]

Recently, also the rehabilitation community has focused the attention towards the patient experience[21, 22] and satisfaction[23] concerning specific healthcare delivery system

such as physiotherapy. In a previous systematic review, Hush and colleagues identified the interpersonal attributes of the physical therapist and the process of care as key determinants of patient satisfaction regarded the physiotherapy performed in outpatient setting for musculoskeletal complaints.[23] Despite this knowledge, there is a need for more in-depth understanding of this topic due to: 1) the increasing burden and the economic complexity behind the musculoskeletal complaints;[24] 2) the multidimensionality of the satisfaction construct;[25] 3) the growing demand for outpatient physiotherapy associated to augmenting privatization in healthcare.[26]

The aims of this systematic review with metasynthesis are: 1) to investigate patient's satisfaction with musculoskeletal physiotherapy treatment; 2) to identify the domains influencing the care process satisfaction. A meta-synthesis design was chosen to advance knowledge through a summary of the qualitative research beyond what is already known.[27] This methodology helps to move policy forward through enlarging our understanding and offering direction for future research.[28]

2. Method

2.1 Design

A systematic review of qualitative studies was completed using Sandelosky & Barroso's guideline.[29] This scientific approach has been adopted in the syntheses of qualitative data in healthcare musculoskeletal research[30, 31] and in the interpretation of findings across studies improving the knowledge on the particular phenomenon of interest.[32] It is composed by specific phases: developing a research question, (b) systematically searching and extracting articles to be analyzed, (c) quality appraisal, (d) study classification, and (e) data synthesis into metasummary and metasynthesis.[29] This systematic review was registered in the Prospero database (CRD42016049124) in November 2016. The reporting was performed in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement[33] and with the Enhancing transparency in reporting the synthesis of qualitative research (ENTREQ).[34]

2.2 Research question and systematic search

The research question behind this study was: "what are the determinants of patient's satisfaction in musculoskeletal physiotherapy performed in outpatient setting?". A comprehensive systematic search was performed in six electronic databases (MEDLINE -via PUBMED-, CINAHL, Web of Science, Scopus, Wiley Online Library, Embase) from inception until March 2017 and it was limited to English language and human subjects. The search strategies adopted were reported in Table 1.

Table 1 search strategies for different database

DATABASE	SEARCH STRATEGY
MEDLINE (VIA PUBMED)	("Patient Satisfaction"[Mesh] OR "patient satisfaction" OR "Consumer Behavior"[Mesh] OR "consumer satisfaction" OR "client satisfaction" OR "patient experience" OR "client experience") AND ("physiotherapy" OR "physical therapy" OR "Physical Therapy Modalities"[Mesh] OR "Musculoskeletal Manipulations"[Mesh] OR "allied health" OR "outpatient")
	LIMITS: english, humans, full text
CINAHL	("patient satisfaction" OR "consumer satisfaction" OR "client satisfaction" OR "patient experience" OR "client experience" OR "customer experience" OR "consumer experience" OR "patient behavior" OR "client behavior" OR "consumer behaviour" OR "customer behavior") AND ("physiotherapy" OR "physical therapy" OR "physical therapy modality" OR "physical therapy modalities" OR "physical therapy technique" OR "physical therapy techniques" OR "musculoskeletal manipulations" OR "manual therapy" OR "manual therapies" OR "manipulation therapy" OR "manipulation therapies" OR "manipulative therapy" OR "manipulative therapies" OR "allied health" OR "outpatient")
	LIMITS: english, humans, full text
SCOPUS	TITLE-ABS-KEY(("patient satisfaction" OR "consumer satisfaction" OR "client satisfaction" OR "patient experience" OR "client experience" OR "customer experience" OR "consumer experience" OR "patient behavior" OR "client behavior" OR "consumer behaviour" OR "customer behavior") AND ("physiotherapy" OR "physical therapy" OR "physical therapy modality" OR "physical therapy technique" OR "musculoskeletal manipulations" OR "manual therapy" OR "manipulation therapy" OR "manipulative therapy" OR "allied health" OR "outpatient")) AND (LIMIT-TO(DOCTYPE,"ar")) AND (LIMIT-TO(LANGUAGE,"English")) AND (LIMIT-TO(SRCTYPE,"j")) AND (LIMIT-TO(SUBJAREA,"HEAL"))
	LIMITS: english, type of document (article), area (professional health), source (documents from journal sources)
Web of science (core collection)	("patient satisfaction" OR "consumer satisfaction" OR "client satisfaction" OR "patient experience" OR "client experience" OR "customer experience" OR "consumer experience" OR "patient behavior" OR "client behavior" OR "consumer behaviour" OR "customer behavior") AND ("physiotherapy" OR "physical therapy" OR "physical therapy modality" OR "physical therapy modalities" OR "physical therapy technique" OR "physical therapy techniques" OR "musculoskeletal manipulations" OR "manual therapy" OR "manual therapies" OR "manipulation therapy" OR "manipulation therapies" OR "manipulative therapy" OR "manipulative therapies" OR "allied health" OR "outpatient")
	LIMITS: english, type of document (article)
Wiley Online library	("patient satisfaction" OR "consumer satisfaction" OR "client satisfaction" OR "patient experience" OR "client experience" OR "customer experience" OR "consumer experience" OR "patient behavior" OR "client behavior" OR "consumer behaviour" OR "customer behavior") AND ("physiotherapy" OR "physical therapy" OR "physical therapy modality" OR "physical therapy technique" OR "musculoskeletal manipulations" OR "manual therapy" OR "manipulation therapy" OR "manipulative therapy" OR "allied health" OR "outpatient")
	LIMITS: type of source (journal), entry terms present in abstract
EMBASE	('patient satisfaction'/exp OR 'patient satisfaction' OR 'consumer experience'/exp OR 'consumer satisfaction' OR 'client satisfaction' OR 'patient experience'/exp OR 'patient experience' OR 'client experience' OR 'customer experience' OR 'consumer experience' OR 'patient behavior'/exp OR 'patient behavior' OR 'client behavior' OR 'consumer behavior'/exp OR 'consumer behavior' OR 'customer behavior') AND ('physiotherapy'/exp OR 'physiotherapy' OR 'physical therapy'/exp OR

'physical therapy' OR 'physical therapy modality' OR 'physical therapy modalities'/exp OR 'physical therapy modalities' OR 'physical therapy technique' OR 'physical therapy techniques'/exp OR 'physical therapy techniques' OR 'musculoskeletal manipulations'/exp OR 'musculoskeletal manipulations' OR 'manual therapy'/exp OR 'manual therapy' OR 'manual therapies' OR 'manipulation therapy'/exp OR 'manipulation therapy' OR 'manipulation therapies' OR 'manipulative therapy'/exp OR 'manipulative therapy' OR 'manipulative therapies' OR 'allied health' OR 'outpatient'/exp OR ''outpatient'
LIMITS: english, type of document (article), human

The keywords used concerning: patient satisfaction, outpatient setting, and physiotherapy treatment. A combination of free text terms and thesaurus or subject headings was adopted due to challenges with methodological indexing of qualitative research.[35, 36] Moreover, a 'berry-picking' method was chosen to further improve the search strategy embracing: footnote chasing, citation searching, hand searching, journal run and author searching (Appendix 1).[37] A medical library health information specialist was consulted throughout the systematic search of the online databases.[38]

2.3 Eligibility criteria and study selection

To be included, studies had: to be qualitative or mixed-method researches that separate qualitative and quantitative data analysis; to encompass subjects with musculoskeletal complaints over 18 years old; to follow physiotherapy treatment performed in an outpatient service; to analyze patient's satisfaction. Studies were excluded if they: were quantitative in nature; were mixed-method studies that do not separate qualitative and quantitative data analysis; included patients with a specific diagnosis of pain attributed to systemic conditions, neurological complaints, rheumatologic/inflammatory disease; performed a treatment not delivered by a physiotherapist and located in an inpatient service. Two authors independently reviewed the articles obtained by the systematic search for eligibility.[29, 39] Titles, abstracts and then the full text of all articles

(manuscript, figures and tables) were screened. When both reviewers individually agreed, a study was included. In case of uncertain eligibility, any disagreement will be resolved through discussion with a research group.

2.4 Critical appraisal

Despite the need to critical appraise the qualitative research remains a debate topic in literature[39, 40] and the best tool is not yet determined,[41-43] the assessment of the quality of all eligible articles was performed to ensure trustworthiness, transferability, dependability, and confirmability of the data.[44] The Critical Appraisal Screening Programme (CASP) for qualitative research was used,[45] due to its extensive adoption in other systematic reviews in musculoskeletal field.[30, 46] The CASP is a 10-question tool useful to examine: research design, recruitment strategy, data collection, researcher and participant relationship, research ethics, data analysis, findings, and contribution to knowledge. The grading system was: "yes", "no," or "unclear" without a numerical score. The quality of articles was not a criterion of exclusion.[47] Two authors determined the quality assessment of the studies independently, with any disagreements resolved using consensus, and consultation with a research group.

2.5 Data extraction, study classification

Data extraction was performed using a purpose-designed format by one author [48] and cross-checked by another author [30, 31] Extracted information included: description of the study population, sample size, gender and age, methods of data collection, aims of the study and key findings. The research group solved any disagreement between the

two researchers. Moreover, we classified the findings from the included studies focusing on the content and form of the data sources.[49] The following classification was adopted: no findings, topical surveys, thematic surveys, conceptual/thematic descriptions, or interpretive explanations.[50]

2.6 Data analysis and synthesis

This systematic review combined both qualitative metasummary and metasynthesis to optimize the validity of the syntheses produced.[49] Metasummary refers to the quantitative summation of qualitative research results,[51] while metasynthesis integrates the qualitative result offering a new interpretation of findings.[29]

According to Sandelosky & Barroso, the included studies were initially read multiple times, line-by-line to gain an idea of the topics and simultaneously analyzed.[29] The target findings under the headings "Results" and "Conclusions" were: 1) extracted, separated from the irrelevant data, copied and pasted into a Microsoft Word (Microsoft Corp, Redmond, Washington) document; 2) grouped for similarity topics (codes); 3) abstracted and formatted creating brief but comprehensive summary of them, removing redundancies to preserve the complexity of their content. Moreover, the calculation of the manifest frequency and intensity effect sizes was performed.[51] The interstudy frequency effect sizes suggested the prevalence rate of each theme, whereas the intrastudy intensity effect sizes identified the concentration of findings in each report.

During the synthetize process, a thematic synthesis was performed using an inductive costant target comparison to identify similarities and differences within and between study findings.[51] The meta-synthesis consisted of grouping similar findings into codes that identified the relevant factors associated with patient's satisfaction towards

outpatient musculoskeletal physiotherapy. These codes were synthesized further to create categories and eventually themes based on consensus among the authors.[51, 52]

2.7 Consideration of Metasynthesis' validity, rigour and trustworthiness

The validity, rigour and trustworthiness of this metasynthesis was guaranteed by several strategies.[29] A multidisciplinary panel of experts performed this systematic review. The authors were clinicians, researchers, and educators, belonging to different background (physiotherapy, nursing and marketing). This strategies helps to continually scrutiny and critiques the procedures and outcomes of the study, improving the translation of the findings.[29]

Moreover, an audit trail was adopted to document every phase of the project, the rationale behind the choice, adoption, creation or leaving of specific strategies.[53] This solution helps to enhance the transparency of reporting and reflexivity process of the panel.[54] Finally, a debriefing sessions and a negotiated consensual validity was performed.[55] The authors during all the phases of this review discussed with a "think aloud" strategies their methodological choices and data analysis procedures and interpretations.[56] Any discrepancies were negotiated and resolved by consensus process.

3.Results

3.1 Study selection

Searching the database resulted in 32430 records. After the removal of duplicates, 20133 records were presented. After the revision of the title and abstract 19632 articles were eliminated. Out of the 501-screened articles, 42 papers were considered as

possibly relevant and were retrieved as full text. 13 studies[57-69] met all eligibility criteria and they were included in the qualitative synthesis. Excluded studies and motivation of exclusion are shown in Appendix 2. No disagreement was seen in the procedures of application of eligibility criteria ad data extraction. The selection process is shown in Figure 1.

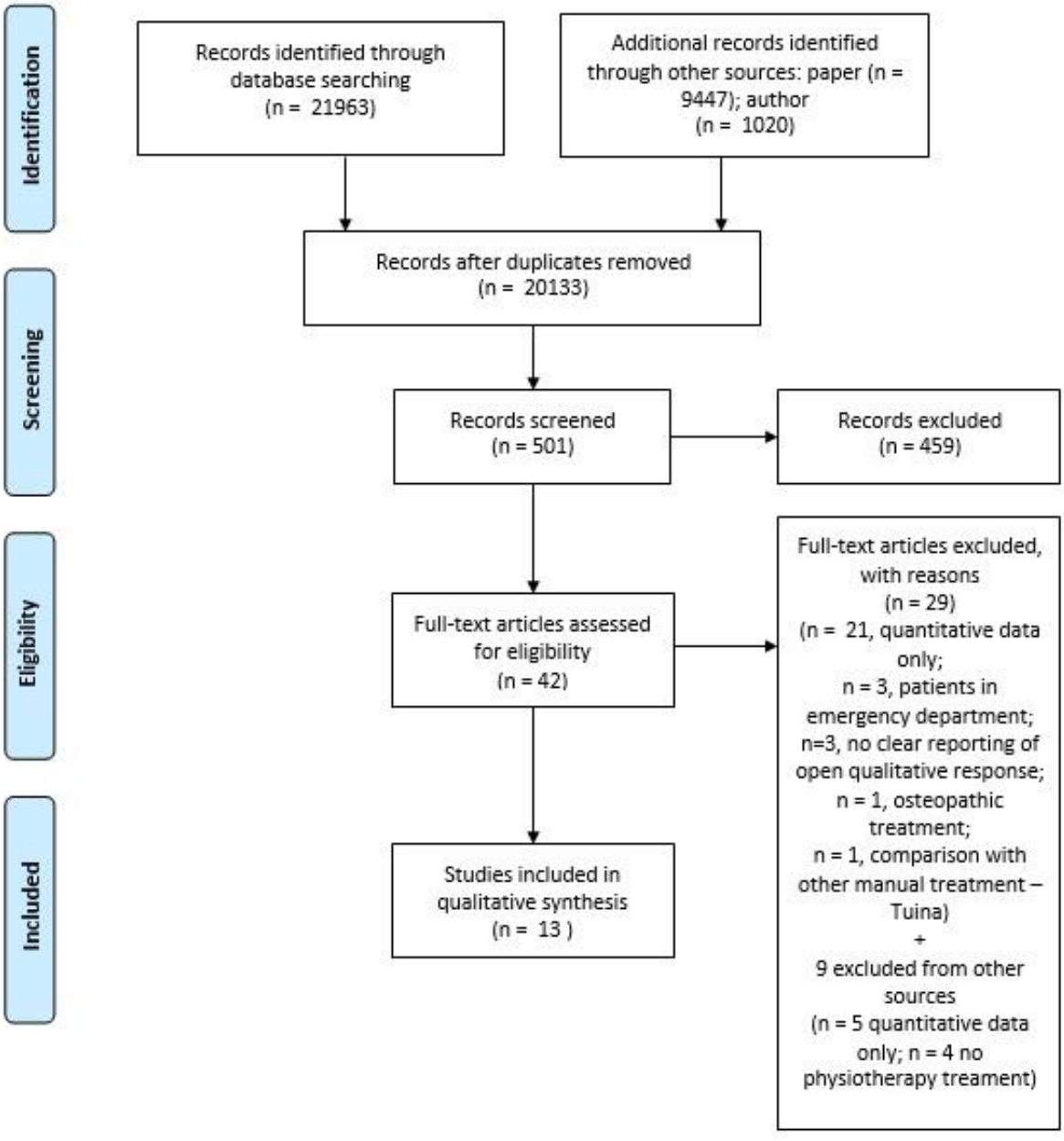

Figure 1 Prisma Flow Chart

3.2 Characteristic of the studies

The number of participants ranged from: 10[69] to 57 [59,64,65] per study, and the sum of them was 446 (41% males and 59% females). The median age of the participants was 51.5 with a minimum value of 19[57] and a maximum value of 84.[66] Globally, patients presented musculoskeletal complaints such as non-specific low back pain,[57, 58, 68] back pain,[63] sciatica.[60] In the other studies there was no specific description of the musculoskeletal complaints.[59, 61, 62, 64-67, 69] Concerning the phase of the pathology, two studies considered the difference between acute and chronic patients,[61, 62] two others studied chronic conditions,[58, 68] and three concentrated on post-acute care.[59, 60, 65] One study targeted a non-acute condition,[69] while the rest of the studies did not make the temporal classification explicit.[57, 63, 64, 66, 67]

The included papers were classified as thematic surveys,[57-59, 61, 63-65, 68] topical surveys[60, 66, 67, 69] and one conceptual/thematic description.[62] Regarding the data collection method the included papers adopted focus groups,[59, 61, 62, 65, 68] semi-structured interviews,[58, 60, 63] focus groups and semi-structured interviews,[57, 65] focus groups and interviews.[69] Only Potter[67] uses the nominal group technique for the data collection process. One study displayed mixed separated data - both quantitative from surveys and qualitative from focus groups.[66] Clinical setting were located in Egypt[57], Spain[59, 63, 64] USA[60], Australia [67,68,69], Belgium [66], England [61, 62,63] and Scotland [58]. A summary of the data is reported in Table 2.

Table 2 Charactheristics of studies included

STUDY	POPULATION	SAMPLE SIZE	SEX (%)		AGE	STUDY AIMS	DATA COLLECTION	KEY FINDINGS INFLUENCING SATISFACTION	CASP ITEMS UNMET
			M	F					
Ali & May (2015)	Non-specific LBP of any duration patients	18	50	50	19-81	Explore patients'expectation and satisfaction with physiotherapy in egyptian patients attending for low back pain	Focus group Semi-structured interviews	-outcome -patient education -the therapist -service provision -decision making	Item n° 4/ n° 6
Evans et al (2003)	Patients with a primary complaint of sciatica (> 4 weeks)	31	55	45	49 (mean)	Explore the issues influencing patient satisfaction with treatment and overall improvement To determine wich outcome measures are most important	Semi-structured interviews	-pain/condition -personnel -treatment -information -scheduling flexibility -evaluation	Item n° 4/ n° 6/ n°8
Del Baño-Aledo et al (2014)	MSK patients receiving postacute rehabilitation service	57	58	42	> 18	To identify elements of the physiotherapist-patient interaction considered by patient when evaluating the quality of care	Focus group	-interpersonal manners -providing information and education - technical expertise	Item n° 4/
Potter et al (2003)	Patients undergoing or underwent (12 or more months previously) physiotherapy treatment from private practice	26	39	61	20-79	To explore patients' perspectives regarding the qualities of a "good physiotherapist To identify the characteristics od good and bad experience in p.p. physiotherapy	Nominal group technique	-communication ability -other attibutes (professional behaviour; organisational ability) -service provided	Item n° 4/

Slade et al (2009)	NS-CLBP patients	18	33	67	51.2 (mean)	To determine patients'experience of exercise programmes	Focus group	Partnership of care: -engagement -'listen to me: i know my body' - 'tell me: explain it to me can understand'	Item n° 5
Medina-Mirapeix et al (2013)	Patients undergoing outpatient rehabilitation for msk condition/ injuries	57	58	42	> 18	To identify elements of the environment that patient consider when evaluating the quality of care experience	Semi-structured interviews during focus group	-physical environment (facility design; ambient conditions; social factors) -organizational enviroment (duration; interruptions; waiting times in the sequence of treatment; patient safety)	Item n° 4/
Cooper et al (2008)	CLBP patients discharge from physiotherapy up to 6 months previously	25	20	80	18-65	To define patient-centredness from patient's perspective	Semi-structured interviews	-communication -individual care -decision-making -information -the physiotherapist -organisation of care	Item n° 5/ n° 6
Hills & Kitchen (2007a)	Acute and chronic msk patients underwent physical therapy treatment in previous 4 months	14 (acute) 16 (chronic)	30	70	36-82	To identify factors leading to satisfaction To provides explanation for relationship between expectations and satiasfaction as a basis for patients'evalu tation of physiotherapy care	Focus group	-expectations -communication /information /explanation -perceptions of the therapist -process/content of treatment -result of treatment	Item n° 4/ n° 6
May (2000)	Back pain patients received physiotherapy during the previous year	34	41	59	29-77	To describe the aspects of physiotherapy care that patients considered important	Semi-structured interviews	-personal manner -professional manner -therapist's role in providing Information -treatment as a consultive Process -structure of service provision	Item n° 4/ n° 6

								-outcome of treatment Episode	
Waters et al (2016)	Non-acute msk patients attending orthopaedic outpatient clinic for follow-up	10	40	60	43.5 (mean)	To identify the factors influencing patient satisfaction with ortopaedic outpatient clinic services	Focus group 1-1 interviews	-clinical waiting time -clinic time -emphaty -communication -expectation -trust -relatedness	Item n° 3/ n° 6
Peersman et al (2013)	msk disorders patients attending physiotherapy treatment in physiotherapy practices	53	-	-	21-84	To establish patients' priorities with regard to outpatient physiotherapy care To determine the association between patients'characteristics and patients' priorities	Focus groups Survey mixed study-separated data	48 themes emerged, six most rated (>85%) -'your PT is expert in his professional field' -'your PT refers you on if he/she can't help' -'the treatment works' -'your PT advises you how to prevent problems' -'your PT adjust treatment if the results are lacking' -'your PT is enthusiastic in his/her work'	Item n° 5
Hills & Kitchen (2007b)	Acute and chronic msk patients underwent physical therapy treatment within the NHS system of care in UK in previous 4 months	14 (acute) 16 (chronic)	30	70	36-82	To explore the factors that affect patients'satisfaction with musculoskeletal outpatient physiotherapy	Focus group	-expectations of treatment -communication /information /explanation -perceptions of the therapist -treatment process /content -outcome	none
Medina-Mirapeix et al (2011)	patients with msk conditions/ injuries undergoing rehabilitation (al least 10 pt	57	58	42	> 18	To explore ambulatory outpatient experiences and perceptions in post-acute care settings	Focus group	-relational continuity (consistency of multi-professional rehabilitation team; established provider-	Item n° 5/ n° 6

treatment session)	To determine if there are any perceived gap in continuity of rehabilitation care	patient relationship) -informational continuity (transfer of information among providers; accumulated knowledge of patients' disability experience) -management continuity (consistency of care among providers; flexibility of the team in adapting care to functional changes or needs; involvement in achieving patient collaboration)

3.3 Quality appraisal

The study of Hills and Kitchen [62] and Del Baño-Aledo[59] was the only one that met all CASP items. The most frequent items unmet was n°4, 5 and 6. Item n° 4 of CASP instrument was unmet by six studies [57,60,67,65,61,63], all the studies score "unclear" as assessment. Item n°6 was unmet by eight studies[67,57, 60, 58, 61, 63, 64, 69]. The result was the same reported for item n°4, expect for two studies that score "no" [63, 69]. Four studies[68,58,66, 64] was assessed with "unclear" in item n°5. The results are show in Appendix 3.

3.4 Metasummary and metasynthesis

Initial coding of included studies resulted in 77 codes, which were condensed to 14 categories and lastly organized into 6 themes (Table 3).

Table 3 Codes, Categories, Themes

CODES	CATEGORIES	THEMES
Outcome, pain-condition, result of treatment, recovery, outcome of treatment episode, treatment works	**result of treatment**	**CLINICAL OUTCOME**
Interpersonal skills, personal manner, attitude, emphaty, support, physiotherapist personality, professional behaviour, organisational ability, perception of the therapist	**attitude/behaviour**	**PHYSIOTHERAPIST FEATURES**
Technical expertise, competence, expert	**competence/technical skills**	
Gender	**gender**	
Acute/chronic condition, area of provenience	**patient characteristics**	**PATIENT FEATURES**
Patient wishes, expectation about physiotherapy, treatment, recovery	**patient expectation**	
Privacy, standard of premises, facility design, ambient condition	**physical environment**	**HEALTH CARE SETTING FEATURES**
	social environment	

Staff, personnel, social factors, rapport with other patients		
Interpersonal skills, verbal communication, non-verbal communication	**communication**	**PHYSIOTHERAPIST/PATIENT RELATIONSHIP**
Continuity, connectedeness, partnership, assertiveness, individual care, trust, relatedeness, relationship	**partnership of care**	
Patient education, about causem treatment plan, prognosis, their role, information, teaching, explanation, advise, involvement	**education/information sharing**	
Organization, time, consistency of care, scheduling flexibility, convenience, accessibility, waiting time, interruptions, organizational environment, structure of service, management continuity, informational continutiy, consistency of team, clinical contact time	**organization of care**	**TREATMENT FEATURES**
Evaluation, treatment, diagnostic and treatment expertise, content of treatment, flexibility in adapting care to functional change	**treatment content**	
	decision making/involvment in the process of care	

Partecipation, involvement in the process, consultive process, collaboration

These themes were: clinical outcome, physiotherapist features, patient features, physiotherapist-patient relationship, treatment features, healthcare setting features.

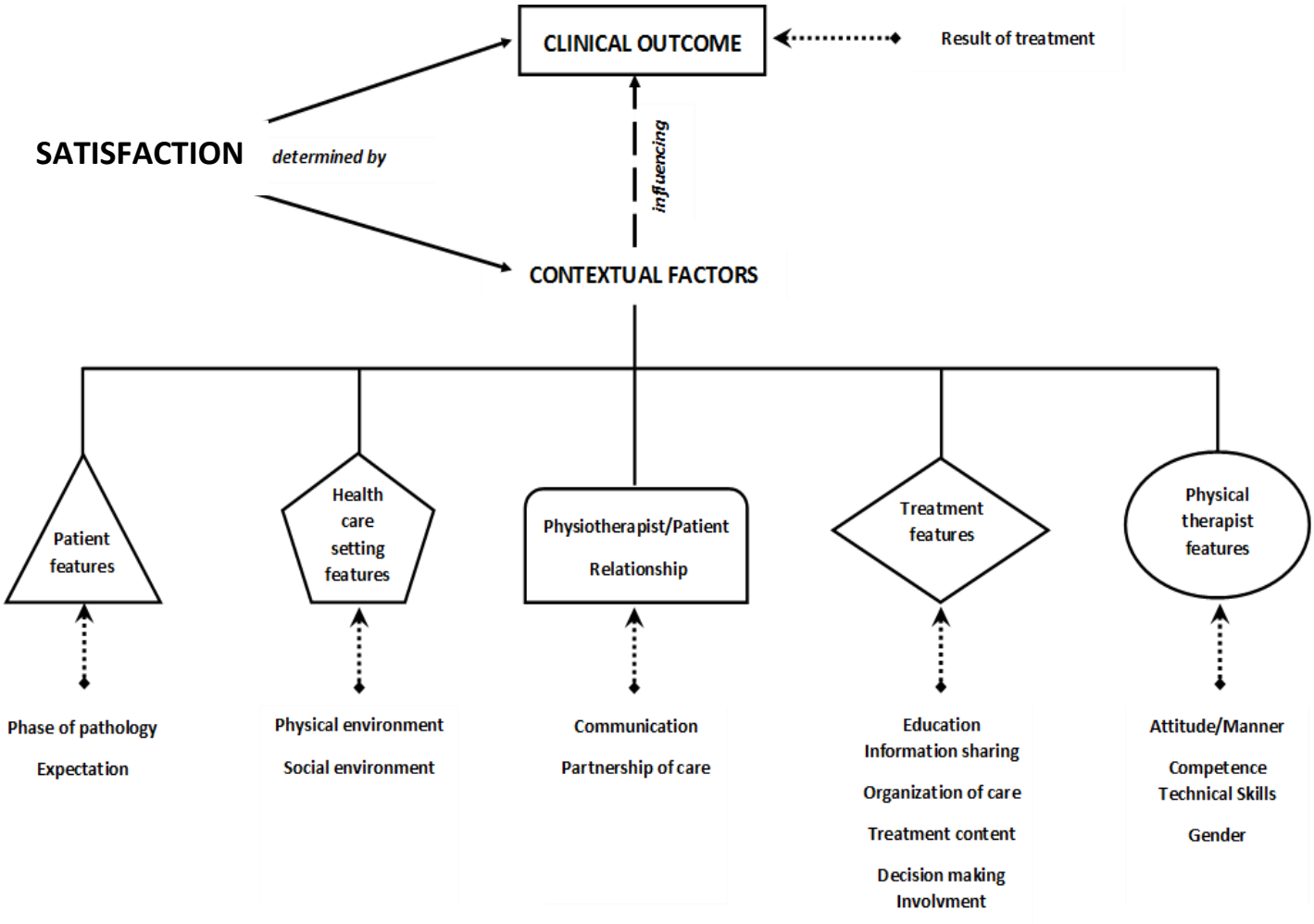

Figure 2 Graphic representation of Satisfaction with care

Globally, they contributed to compose the patient's satisfaction towards physiotherapy performed in outpatient setting (**Figure 2**)

The metasummary process is displayed in table 4. The most frequent categories were: organization of care (85%), education/sharing of information (85%), attitude/manner of the physiotherapist (77%). Peersman et al[66] (86%) and Hills & Kitchen[61] (71%) presented the highest level of intensity, while Del Baño-Aledo et al[59] and Medina-Mirapeix et al[64] revealed the lowest (21%).

Table 4 Metasummery

THEMES	categories *(abstracted findings)*	FIRST AUTHOR													
		Ali & May (2015)	Evans (2003)	Del Baño-Aledo (2014)	Potter (2003)	Slade (2009)	Medina-Mirapeix (2013)	Cooper (2008)	Hills & Kitchen (2007 a)	May (2000)	Waters (2016)	Peersman (2013)	Hills & Kitchen (2007 b)	Medina-Mirapeix (2011)	Frequency
CLINICAL OUTCOME	result of treatment	X	X						X	X		X	X		46 %
PHYSIOTHERAPIST FEATURES	attitude/behavior	X	X	X	X			X	X	X	X	X	X		77 %
	competence/technical skills	X	X	X	X			X		X		X			54 %
	gender	X													8 %
PATIENT FEATURES	patient characteristics								X			X	X		23 %
	patient expectation	X						X	X		X		X		40 %
HEALTH CARE SETTING FEATURES	physical environment	X					X					X			23 %
	social environment		X				X					X			23 %
PHYSIOTHERAPIST/PATIENT RELATIONSHIP	communication				X	X		X			X	X	X		46 %
	partnership of care					X		X			X	X	X	X	46 %
TREATMENT FEATURES	education/information sharing	X	X	X	X	X		X	X	X		X	X	X	85 %
	organization of care	X	X		X		X	X	X	X	X	X	X	X	85 %
	treatment content				X	X		X	X		X	X	X	X	61 %
	decision making/involvement in the process of care	X						X			X	X	X	X	46 %
	Intensity	64 %	43 %	21 %	43 %	29 %	21 %	64 %	50 %	36 %	50 %	86 %	71 %	36 %	

Frequency = (number of study containing a finding / total number of study) * 100
Intensity = (number of findings in the study / total number of findings) * 100

3.4.1 Theme 1: clinical outcome

Result of treatment

The complete recovery was one of the most important aspects of patient's satisfaction.[57, 60, 61] The achievement of outcome influenced the assessment of care satisfaction and a failure to reach these could induce negative opinion towards physiotherapy.[57] Specifically, outcomes were considered as: the reduction and modification of pain, range of motion improvement and good functional recovery from an injury.[60, 62] The typology of treatment delivered was not important, but patients appreciated any therapy that result in the desiderated outcome.[57, 63, 66] Patients sought relief from symptoms, but their satisfaction is not only about this dimension[63] and it depended from the phase of pathology considered. [62] In patient with chronic disorders, learn strategies for coping with their problem, even in absence of a total resolution was considered satisfactory.[57, 62, 63] In certain case, this feeling was develop after the treatment experience, when the patient received information regarding the nature of the condition and accepted that there was not a magical cure.[62, 63] The absence of this acceptance, even in subjects with previous physiotherapy experience, could generate negative outcome when patient did not feel an important relief.[62] In acute condition, patient with good functional recovery, progression in everyday activities resulted in positive outcome and has a positive opinion about physiotherapy. [62] A poor outcome is attributed with the infrequency of session that was considered as dissatisfactory (e.g. one at week for acute problem).[62]

3.4.2 Theme 2: physiotherapist feature

Attitude/Behaviour

Patients desired a professional friendly, sympathetic, respectful, professional, caring, supportive, considerate, patient, genuine, polite, helpful, listening, pleasant, clean, hygienic, moral, punctual, reliable.[57-61, 63, 67] The physiotherapist had to be non-judgmental, not egoistical and he/she wanted to be a physiotherapist.[67] He/She should put patient at ease, create a positive environment which allows patients to relax, show passion and enthusiasm for his/her job, inspire confidence, safety, maintain professional distance and confidentially.[57, 63, 66, 67] He/She needed to be honest, through, precise and effective during work.[57, 67] He/She needed to: have organizational ability, collaborate and communicate with other professionals, suggest alternative in treatment and treat different patients in the same way.[67] Ha/She had to be able to give emotional support, supportive care and empathy.[59, 63, 69] Patients felt supportive care to be fundamental in learning how to deal with their problem.[59] Empathy are perceived by patients from therapist's attitude and behaviors [59] , this feeling influenced patients' satisfaction and probably reinforced their relationship with physiotherapist[69]. Abruptness, lack of empathy, fell of not to be inform or listen were linked with dissatisfaction.[58, 62] Patients needed to be listening, to be understood and wanted a professional interested in their well being. These could develop a positive strive in their physiotherapy improvement as a way of repaing physiotherapist's effort in their behalf.[62] All these qualities could not be enough for patients to perceive a high quality service and their feeling to experience patient-centered treatment.[58, 59]Also, it seemed to be necessary a particular sensitivity to patient's change in need, function and emotional status. This sensitivity had to create an immediate response in physical therapist's behavior and practice (e.g. treatment, timetables) in relation to patient's

changes.[59] A poor treatment outcome was not perceive as a physiotherapist's fault if patients noted that physiotherapist did the best or was through.[58]

Competence/technical skills

The physiotherapist had to be skillful competent, expert in his/her field and to seek further knowledge for patient care.[57, 58, 60, 66, 67] Technical expertise influenced patient's perception of quality service and satisfaction.[59, 63] Patients offered this judgment base on the practiotioner's ability to provide a good assessments, their positive feeling about physiotherapist's knowledge, manual skills, thoroughness and when they experience early improvements of functioning.[59, 63] These factors and physical therapist's performance are important to gain patient's trust and respect,[57] but it could not be enough to determine satisfaction with delivered care and patients' perception to experience patient-centers care.[58]

Gender

In general, Egyptian patients felt confortable with physiotherapists of the same gender, but if there were possibility to have an expert physiotherapist, he/she was favored over less experience colleague.[57]

3.4.3 Theme 3: patient feature

Phase of pathology

The phase of musculoskeletal pathology (acute vs chronic) influenced the expectation of treatment, the relationship with the physiotherapist and the overall evaluation of care.[62] The physiotherapy input appeared to be more successful in management of patients with acute condition, although some patients achieve not optimal result.[61] No differences emerge from patients who live in inner city and suburban areas.[62] Peersman [53] found out that female patients valued more privacy, safety and freedom of choice in treatment than males.

Expectation

Fulfillment of patients' expectation could affect satisfaction with care,[62] especially when are informed, and assessing their wishes is a key factor in patient-centerd decision making model.[58, 62] Expectation could change during treatment after the nature of patient's condition is well explained (e.g. recurrent low back pain) and some subjects modified their expectation of curing to coping.[57] When the clinicians are unable to meet patient's expectation, a dissonance emerges.[69] These expectation are formed from information by referring doctor,[69] patients' previous positive or negative experiences,[61, 62] patients' idea and beliefs about recovery (e.g. full, good, resolution of the problem) and treatment (e.g. to be painful, specific treatment modalities), and the nature of condition (acute or chronic).[61] When expectation to be help are positive or tentatively formed and there are meet or exceed by treatment, patients tend to report positive

outcome. The lack of satisfaction arise when unrealistic or negative expectations where detected.[62]

3.4.4 Theme 4: physiotherapist-patient relationship

Communication

Tailored communication to individual's need affected patients' feeling of connectedness, inclusion and involvement.[58, 69] Poor communication and perception of not taken seriously could develop negative experience.[62, 68] Inability to discuss their needs, receive poor explanation and scarce interaction with the therapist were related make patient feel not involve.[58, 69] Good communication required input form both parties and physiotherapist's specific interpersonal skills and behavior. Listening, empathy, body language that built trust, make eye contact and speaks directly to patients, be receptive to what patients as to say, introduce him/herself properly, respect patient point of view, be understanding, getting to know the patient, taking time over explanation and explain with appropriate terminology, encourage patient's participation were behavior considered important when evaluating communication and its effectiveness.[58, 67, 68] Moreover, patients appreciate when therapist are honest about the possibility to help them with their problems.[66] Patient could not appreciate written communication, as advising a book, and the requirement to tell and retell their own story.[58, 68]

Partnership of care

Good relationship could arise patients' sense of connection with care, relatedness with the therapist, trust in healthcare provider, encouragement through the treatment,

especially in chronic condition and engagement with the care process.[58, 62, 64, 68, 69] Care-seeker satisfaction may improve if therapist are willing to respect the patient, listen, respond, consider patients' experience and abilities in planning exercise programs, show problem- solving, mutual equity, assertiveness and take the time to getting to know the patient.[58, 66, 68] Unsatisfied patients report a need for democratic and more personal relationship, a feeling of poor continuity of care, a sense of abandonment by care-providers and they value the possibility to contact their physiotherapist after the end of sessions.[62, 68] Patients desire negotiation and renegotiation with the therapist to establish mutual therapeutic goal and wanted individualized program and treatment base on their need, value, preference, life-style.[58, 68] The patients' feeling of weak interpersonal relationship due to poor communication during sessions could cause loss of connection with care provider.[64] For some patients consistency of same therapist during the course of treatment it is not enough to develop a good relationship and a sense of connection over time.[64]

3.4.5 Theme 5: physiotherapist-patient relationship

Education/Information sharing

Education and information sharing affected patient's satisfaction, perception of quality service and could help to develop positive therapeutic experiences.[57-59, 63, 68] Information consider relevant for patients concerned assessment and its motivation, diagnosis, cause of problem (appreciated anatomical and biomechanical explanation),[57, 63] patient's role and responsibility in care, treatment plan, alternative treatment, effect of treatment, treatment itself (what physiotherapist are doing and why,[67] information about self-management, exercises,[57, 63, 64, 67, 68] prognosis and long term consequences

and how to prevent future problem, possible restriction and warning symptoms.[57-64, 66-68] Correct and effective explanation helped patient to understand the nature of their condition, to gain confidence and motivation in their treatment plan.[57, 62, 63] Education is an active process, not a passive interaction between physiotherapist and patient, where physiotherapist provide feedback time by time.[63, 67] Some patients have strong motivation to understand their problem and its management. In their opinion explanation should be accurate, understandable, free of jargon and should help the patient to understand their role in their problem.[57, 59, 68] For other information sharing was the most helpful part of the process.[58] It was valuable the use of chart, drawings, written information and models.[63, 67] It's strongly advise to investigate what type of information the patient seek to achieve [58].

Organization of care

Positive qualities of organization of delivery care were identified in convenience location and hours (e.g. morning appointment),[62] easy booking, schedule flexibility, short waiting list and times (also between therapies in multi-modal treatments),[65] accessibility, ease access to injured or disable, punctuality of sessions, not waiting longer than 5-10 minutes, not busy location and not over busy therapist[57, 58, 60-63, 66, 67, 69] Patient's satisfaction seems affected in a negative way when the physiotherapist is perceive to be rushed or absente (e.g. when he/she left for a consult with colleague or other patients) and when they experience interruption in delivery care or they don't feel observe and monitoring during exercises.[58, 62, 63, 65, 69] They preferred have the same therapist (better a senior, especially in evaluation and revaluation process),[57, 66] during the course of treatment. This reinforced the possibility to establish a relationship and

allows the therapist to getting to know patient own dimension, problems and their individual characterizes.[57, 58, 64, 66] Consistency of care is important, both in multi professional rehabilitation team when managing the patient in sub acute condition[64] both in treatment session[57, 58] and it enhances satisfaction. Also the discharge need to be well organize and patient want to be informed about follow-up and want to have the possibility to contact and direct access to their therapist in case of doubt or flare-up.[58, 62] The absence or lack of these qualities could generate low satisfaction with care and low quality of service.[58, 62, 69] Low satisfaction is also refer by patient's when they noted lack of coordination inside organization and among different rehabilitation providers (e.g. between physiotherapists that treat the same patient in the same time or different time, and physicians and physiotherapist) and absence of informational and management continuity and transfer of information among colleague.[64, 65]

Treatment content

Patients want treatment and delivery of treatment to be individualized.[58] This is important especially in the prescription of exercises. Patient appreciates when exercises are similar and fit to their life-style. This affects the compliance and adherence to the exercise program.[58, 67] Some patient considered important the actual treatment experience, the evaluation,[58, 60] in particular post injury (both clinic exam and view of imaging, make them feel safety[62] and they prefer an "hands on" treatment that provide self-help strategies (e.g. exercise at home, what patients can do/not do for themselves).[67] Great emphasis has the exercise,[58, 61, 68] its typology, explanation, duration and aim.[68] Patient refer that through exercises they feel empowering, they begin to know their body, its response to pain and activities.[68] If the treatment doesn't

seem to work, it's important that therapist adjust it.[66] Flexibility in adapting care to functional changes or needs during the treatment is important when evaluating satisfaction. This response need to be quickly, because if it's feel delayed, it's considered a stopping point in the rehabilitation process.[64] Difference was noted between individual care and group care. The last seem inappropriate to meet patient's need. This appear to be related with the physiotherapist persona that lead the group, not only with the group environment.[58]

Decision making/Involvement in the process of care

Patients need to be listening and involve in their treatment and to collaborate on their plan of care. They preferred a consultive process, where their needs are meet and their individual characteristics are valued, rather than a prescriptive treatment.[57, 63, 64] Some of them mature the feeling to participate in planning their treatment after the therapist explain the importance of their input to develop a customize therapy for their needs.[57] Other refers that their therapist did not seek collaboration or explicit request it,[64] consider important freedom of choice, especially female,[66] and desire more involvement in decision-making.[58] Several patients prefer to delegate decision making to therapist, because he/she is the expert, the professional and should decide the best course of treatment and prevent patients' wrong decision, but every decision has to be explained and justified to patients during the process.[57, 58] Other prefers to not participate in decision-making process.[57] An individualized, communicative decision-making approach seems to be the best fit to meet patient's needs.[58]

3.4.6 Theme 6: healthcare setting

Physical environment

Facily design and ambient conditions affected patient's satisfaction.[57, 65, 66] Negative experiences are referring to unpleasant temperature and smells,[65] low hygiene, noise and poor condition of therapeutic and non equipment (e.g. disservice, being broken, lack of up-.date), not only from an aesthetical point of view, but also in practical issue.[57, 65] Low satisfaction and low service quality seems to be related with poor standards of treatment facilities, low visual privacy, in particular for women,[66] during the treatment or moving to one room to another and the absence of private change room.[57, 65]

Social environment

Characteristic of staff as friendliness, courtesy, concern and competency are important factors on determine patient experience.[60] The perception of service quality is affect by high number of patient in service setting. These could develop a feeling of saturation and inability to provide a good service.[65] Although it appears to be important to patient to have good interactions with other patients, especially during group therapy.[65, 66] The environment is felt motivational when patients support each other in their efforts and share similar stories and disability. They refer positive influence on quality environment when this happen.[65]

4. Discussion

Summary of evidence

To our knowledge this is the first systematic review of qualitative studies patient's satisfaction and its domain. Our finding suggested satisfaction as a multidimensional concept influenced by clinical outcome and other factors such as patient and physiotherapist features, treatment features, patient and physiotherapist relationship and healthcare setting features according to previous research.[70,23,71] These other factors that tend to affect patient's satisfaction are similar to what literature about placebo defined as contextual factors.[72] The most frequent categories were: attitude/behaviour of physiotherapist, education/information sharing and organization of care.

Clinical outcome, especially in chronic disorders, appeared to be an important element, but it seems to be not the only dimension that determined patient's satisfaction[23], in contrast with Donabedian model about satisfaction, where treatment outcome was a key element.[73] Other works reported different level of satisfaction between process of care and outcome of care and weak correlation between these two dimensions.[74,75] Also in medical context, as orthopedic clinic, this weak correlation emerged as well.[76,77]

Hush[23] found that therapist attributes are the most determinant on patient's satisfaction. Interpersonal skills, technical skills, appearance and interact style affect patient's perception of physiotherapist and could influence treatment outcome and level of satisfaction[23,78–83] Expertise, professionalism, qualification, reputation, level of knowledge are valued by patients[23,66,30,82,83]. It seemed to be more important the perception by patient than the actual technical skills and knowledge.[30] Poor appearance

also could affect patient's perception and led to negative experience with process of care[80] and patients could have different idea of professional attire about male and female physiotherapist (for example Australian patients prefer business attire for male therapist[84]). Empathy was the most determinant quality that impact on satisfaction[23,85] and interpersonal skills as listening and understand were fundamental for patient's experience with process of care.[30] This was in line with other medical context, as surgey clinic[86] and different medical specialities.[87] This perception by patient was perceived also from practioner's personal manner, attitude and behaviour. A calm, gentle personal manner and approach, a friendly and welcoming attitude impacted positively on treatment outcome.[82,88,89]

Chronic or acute conditions were important patient's characteristics influencing the evaluation of care. This difference was probably related to different expectation about treatment. Other identified characteristics were: age[23,66,90], socioeconomics issues[66,91]and sex.[92] Exepectation seemed to have an important [93] and independent impact on satisfaction[94]. Expectation and needs of patient affected treatment outcome[23,30,95,96] and were influenced by different elements as previous experiences, present conditions, social background, beliefs, personality and patient's preference.[6] Precisely normative expectation was related to satisfaction and unmet these could result in less satisfaction.[96] Hills and Kitchen[61,62] proposed a model about expectation-satisfaction referring to Oliver's disconfirmation paradigm.[97] However the role of expectation in relation to satisfaction is controversial and not well defines yet.[25]

Communication and a positive partnership of care were one of the pillars of patient-centered treatment and in medical care is highly correlated with better patient adherence and collaboration. [98] In medical context, 80% of patient complaints seemed

to be secondary to a breakdown in communication.[30,99] Communication and partnership with physical therapist were considered fundamental for therapeutic alliance, treatment outcome and satisfaction[30,93,100,101] and were modulated by verbal and non-verbal communication.[102] Non-verbal comunication, as facial expression, eye contact and body language, affected therapeutic interaction, but there were scarse and inconclusive study about it in physiotherapy context.[81] In the light of these results, in recent years there is a growing need for therapist to develop specific communication skills.[30,103,104] However, O'Keefee[30] found that physiotherapy didn't recognize its weight as patient does. Patients experience good partnership with physiotherapist when therapist showed active listening and encouragement, humor and sympathy, empathetic and communicative goal negotiation and renegotiation, paraphrasing and requests for the patient's opinion. These features was able to significantly influence clinical outcome and patients' satisfaction.[23,30,81,105] Moreover, adding motivational interventions seemed to increase patient's physical activity and their short- and long-term adherence of exercises program.[106]

The importance and efficacy on patient experience and outcome of education and information sharing about the problem, the cause, the treatment (especially exercises[68]), the prognosis and the patient's role is well recognize in literature [30,81,107], especially about pain and its management and mechanism[88,108] and also on lifestyle related health condition.[109] Give clear explanation and information, cognitive reassurance without adopting technical term or medical language facilitated the process.[30,87,88,89] Paradoxically, patients gave an incredible importance to education and its delivery while for physiotherapist it didn't seems to have the same importance in the process of care[30]. Organization of care represented one extensive domain. Short

waiting list, courtesy and competence of staff and personnel, flexibility timetable, punctuality, cleanliness, timely and efficient treatment, adequate frequency, duration and follow-up were valued by patient and positive impact on their perception.[30,23,66,105,110] Satisfaction seemed to be relate with convenience, accessibility and availability.[30] However a well-organized physiotherapy care was a weak predictors of satisfaction with physiotherapy care[23,111–113] and also in orthopaedic clinics, where Kreitz[114] found out that waiting time are not correlated with level of satisfaction. From our finding, on the contrary, this was an aspect frequent reported by patients. A greater extent seemed to have process of care, where, according to patients, continuity with same therapist was one of the most important aspects of their rehabilitation experience.[23, 111, 65] They believe that this continuity could bring to better management and understanding of their problem. Also, it reinforced personal relationship that contributes to develop a positive experience. It was important for patients to have time with their therapist and not feel rushed or manage.[30,115] Actual treatment content has not yet been extensively studied relating patient's satisfaction and quality service in quality studies. Patient appreciated treatment that works, possibility to adjust it if it doesn't achieve results, to discuss alternatives with the therapist and to be educated about actual treatment (what the therapist is doing).[30] Previous experience with physiotherapy, expectation with particular therapy and positive or negative believes about one treatment may influence patient's preferences about it and probably its outcome.[23,30] Therapeutic alliance enhanced if patient was involve in the consultation process.[81] Patient-centred care appeared to affect treatment outcome[23,30,81,105,116] and it seemed to be more appreciated and effective a consultative process and personalized treatment, where patient's needs and opinion were respected and valued and their individual characteristics were taken account, rather than a prescriptive

treatment.[23,30,64,81,105] An individualized, communicative decision-making approach is necessary to understand patient's will to be involved in their treatment and to create an individualized tailor care. For example, some patient trusted their therapist as expert professional so they tend to delegate decisions, but only if every step was explain, other didn't know their role and their responsibility regarding their condition and delegate to the practitioner, so it was necessary to educate them relating the self-management activities and what they could do to enhance their condition and symptoms. [57,58]

Health care setting had a role on patient's outcomes, as pain, stress and anxiety.[116] Pleasant aromas and adequate temperature had a positive influence on patient's perception of environment, also as natural lighting, low noise and soft music.[118–120] The design and architecture of structure and its premises and its condition were considered in evaluating process of care, as parking accessibility, accessible entrances, visible and clear sign, decoration and ornament (i.e. green vegetation, flowers, view of nature seems to have calming effect[119,120]), cleanliness, private setting, privacy and good quality of equipment and machine.[23,65,66,118,121] Staff and desk personnel also influenced the evaluation of care and patient's satisfaction. Courtesy, competence and availability were positive qualities taken into account by patients.[69,93,122] Some social environment characteristics could impact positively on patients' experience with care, as encounter with other patient with similar condition and not overbook setting. To practitioners it seem to be useful to manage and edit details relating health care setting. Patients valued these enviromental elements and they could modulate their experience in a positive or negative way.

5. Limitations and Conclusion

The present study present some limitations, despite we followed PRISMA checklist for systematic review[33] and ENTREQ guidelines.[34] First, our work is influenced by the findings of primary studies,that may be affected by interaction between researches and partecipants and are based on the questions they posed in focus group and semi-structure interviews, the results they presented and the characteristics of population and intervention. Second, the findings of qualitative synthesis is an interpretion of data and metasynthesis present an interpretation of interpretation[29], although our findings were discuss and validated with co-author. However there are congruences among our results and other researches regarding similar themes.[23,30] Third, there may have been missed studies, although the search strategy was thorough, and because papers were excluded if not written in English and not peer-reviewed. Fourth, the findings about content of treatment and patient features were limited among the study, as shown in the metasummery. These suggesting further research is needed in these fields investigating patients' expectation about different type of treatment and how it may impact on evaluation of satisfaction and process of care and to examine in detail how specific patient features may affect their perception of quality care. Further reaserches is also needed to examine dissatisfaction, specific weight of each contextual factors related to satisfaction with care and how it may influence patient's perception of quality care. More specifically, a deeper focus on patient features, perphaps thorugh a more detail subgrouping of population, could be useful to practiotioners to better understand what patient value, want and consider important. Also a better understand about patient's expection, how it is related with satisfaction and in what effective way it's possible to therapist to change it during the course of treatment. Fourthmore it would be interesting

more works conducted in different location, as South America o Asia for example, to see if social values or diversity of health care system (e.g. private or public) could affected patients' perception and their satisfaction.

Clinical implications

In light of our findings, physiotherapist have to reflect and interrogate themselves about what they could change in their clinical practices to enhance patient's satisfaction. This multidimensional concept is influenced by different variables and therapist should acknowledge the potential to modulate contextual factors to enhance patient's experience with process of care. It is useful for pratictioners to investigare and indagate patient's features and their dimension, world and values and they have to take in account these characteristics to create a personalized and individualized treatment and approach. They need to recognize that their own persona, appearance and behavior have an important impact and are able to modify patient's attitude and behavior too. Also it is strongly advise to spent time to educate patients about every aspect of physiotherapy care and to delivery this education in an active way and tailored on the specific subject they have in care. Education is the key to change patient expectation and behavior and it possible result in better clinical outcome and satisfaction. During the delivery of treatment, their presence and monitor are fundamental to feel patient take in care and to enanche their satisfaction. Practitioners need to cure in detail every step and aspect of process of care; from appointment timetables, clinical setting, design and quality of their structure to staff personnel, social environment and management continuity. These require a great effort from physiotherapist. Our suggest is that a specific formation is needed in these aspect to achieve positive outcome and to enhance patient's experience, especially management, communication and psychological competences

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7. APPENDIX

APPENDIX 1

ALL AUTHOR DIVIDED FOR PAPER	NUMBER OF PAPERS FOR AUTHOR
Ali N	2 (1)
May S	99 (1)
Evans RL	17 (1)
Maiers MJ	5 (1)
Bronfort G	61 (1)
Del Baño-Aledo ME	4 (3)
Escolar-Reina P	20 (5)
Medina-Mirapeix F	26 (5)
Collins SM	27 (3)
Montilla-Herrador J	13 (2)
Oliveira-Sousa SL	7 (1)
Sobral-Ferreira M	4 (1)
Potter M	46 (1)
Gordon S	13 (1)
Hamer P	29 (1)
Slade SC	4 (1)
Molloy E	37 (1)
Keating JL	4 (1)
Cooper K	13 (1)
Smith BH	121 (1)
Hancock E	10 (1)
Hills R	4 (3)
Kitchen S	11 (4)
May SJ	1 (1)
Waters S	1 (1)
Edmondston SJ	14 (1)
Yates PJ	22 (1)
Gucciardi DF	28 (1)
Peersman W	4 (1)
Rooms T	1 (1)
Bracke N	27 (1)

Van Waelvelde	33 (1)
De Maeseneer J	101 (1)
Cambier D	58 (1)
Sandelowski	90
Barroso	63
Tot. Author = 36	1020 (52)

JOURNAL	**Number of papers retrieved**
Physiotherapy Research International	59 (1)
Journal of manipulative and physiological therapeutics	278 (1)
Physiotherapy	624 (3)
Australian journal of physiotherapy	81 (1)
Clinical Rehabilitation	582 (1)
Archive of physical medicine and rehabilitation	1666 (1)
Physiotherapy theory and practice	249 (2)
Manual therapy	125 (2)
Journal of Rehabilitation Medicine	30 (1)
Neurorehabilitation and Neural Repair	129 (0)
Human Reproduction	393
Gait and Posture	99
Journal of Biomechanics	48
Journal of NeuroEngineering and Rehabilitation	48
Journal of Head Trauma Rehabilitation	13
Journal of Neurologic Physical Therapy	7
AAC: Augmentative and Alternative Communication	62
Journal of Intellectual Disability Research	197
Topics in Stroke Rehabilitation	248
Disability and Rehabilitation	265
Journal of Cardiopulmonary Rehabilitation and Prevention	40
Journal of Rehabilitation Research and Development	390
Journal of Occupational Rehabilitation	168
Rehabilitation Psychology	70
American Journal of Physical Medicine and Rehabilitation	100
Journal of Stroke and Cerebrovascular Diseases	16
Journal of Sport Rehabilitation	14
European Journal of Physical and Rehabilitation Medicine	20
Neuropsychological Rehabilitation	182
Journal of Aging and Physical Activity	680 → human kinetics journal
Journal of burn care & research	60
Psychiatric Rehabilitation Journal	107
Journal of Hand Therapy	97
Journal of Special Education	41
Musculoskeletal care	138
American Journal of Sports Medicine	249

British Journal of Sports Medicine	249
International Journal of Behavioral Nutrition and Physical Activity	30
Exercise and Sport Sciences Reviews	2
Medicine and Science in Sports and Exercise	22
Journal of Science and Medicine in Sport	6
Journal of Orthopaedic and Sports Physical Therapy	198
Journal of Athletic Training	0
Journal of Physiotherapy	29
Journal of Strength and Conditioning Research	0
Applied Ergonomics	172
Journal of Sports Sciences	81
Physical Therapy	265
Scandinavian Journal of Medicine and Science in Sports	85
Journal of Neurologic Physical Therapy	7
Physical Education and Sport Pedagogy	15
Sport, Education and Society	17
Ergonomics	221
Clinical Journal of Sport Medicine	40
Qualitative Research in Sport, Exercise and Health	23
Research in Sports Medicine	18
Sport in History	10
Sports Health	50
Physical Therapy in Sport	2
Clinics in Sports Medicine	121
Sports Medicine and Arthroscopy Review	60
European Physical Education Review	8
Research Quarterly for Exercise and Sport	141
Tot. Journal = 63	9447 (13)

APPENDIX 2

References	Motivations
Carlesso LC, MacDermid JC, Santaguida PL, Thabane L. A survey of patient's perceptions of what is adverse in manual physiotherapy and predicting who is likely to say so. J Clin Epidemiol. 2013 Oct;66(10):1184-91.	Quantitative method
Abtahi AM, Presson AP, Zhang Z, Saltzman CL, Tyser AR. Association Between Orthopaedic Outpatient Satisfaction and Non-Modifiable Patient Factors. J Bone Joint Surg Am. 2015 Jul 1;97(13):1041-8.	Quantitative method
McKinnon AL. Client Satisfaction with Physical Therapy Services does age make a difference. Physical and Occupational Therapy in Geriatrics 2001 19:2 (23-37)	Quantitative method
Solomon DH, Bates DW, Horsky J, Burdick E, Schaffer JL, Katz JN. Development and validation of a patient satisfaction scale for musculoskeletal care. Arthritis Care Res. 1999 Apr;12(2):96-100.	Quantitative method; specific diagnosis
Roush SE, Sonstroem RJ. Development of the Physical Therapy Outpatient Satisfaction Survey (PTOPS). Phys Ther. 1999 Feb;79(2):159-70.	Quantitative method
Diògenes TPM, Mendinca KMPP, Guerra RO. Dimension of satisfaction of older adult brazilian outpatients with physical therapy. Rev Bras Fisioter. 2009 Jul;13(4).	Quantitative method
Metcalfe CJ, Klaber Moffett JA. Do patients' expectations of physiotherapy affect treatment outcome Part 1 Baseline data International. International Journal Of Therapy & Rehabilitation 2005 Feb;12(2):55-62.	Quantitative method
Schafer DS. Environmental-scanning behavior among private-practice physical therapy firms. Phys Ther. 1991 Jun;71(6):482-90.	Quantitative method
Sephton R, Hough E, Roberts SA, Oldham J. Evaluation of a primary care musculoskeletal clinical assessment service a preliminary study. Physiotherapy. 2010 Dec;96(4):296-30.	Quantitative method
Roberts L. Improving quality, service delivery and patient experience in a musculoskeletal service. Man Ther. 2013 Feb;18(1):77-82.	Quantitative method
Hush JM, Lee H, Yung V, Adams R, Mackey M, Wand BM, Nelson R, Beattie P. Intercultural comparison of patient satisfaction with physiotherapy care in Australia and Korea an exploratory factor analysis. J Man Manip Ther. 2013 May;21(2):103-12.	Quantitative method
Larsson MEH, Kreuter M. Is patient responsibility for managing musculoskeletal disorders related to self-reported better outcome of physiotherapy treatment. Physiother Theory Pract. 2010 Jul;26(5):308-17.	Quantitative method
Medina-Mirapeix F, Jimeno-Serrano FJ, Escolar-Reina P, Del Baño-Aledo ME. Is patient satisfaction and perceived service quality with musculoskeletal rehabilitation determined by patient experiences. Clin Rehabil. 2013 Jun;27(6):555-64.	Quantitative method

Beattie P, Dowda M, Turner C, Michener L, Nelson R. Longitudinal continuity of care is associated with high patient satisfaction with physical therapy. Phys Ther. 2005 Oct;85(10):1046-52.	Quantitative method
McMurray J, McNeil H, Lafortune C, Black S, Prorok J, Stolee P. Measuring Patients' Experience of Rehabilitation Services Across the Care Continuum. Part II Key Dimensions. Arch Phys Med Rehabil. 2016 Jan;97(1):121-30.	Mixed method that not separate qualitative and quantitative analysis
Durant TL, Lord LJ, Domholdt E. Outpatient views on direct access to physical therapy in Indiana. Phys Ther. 1989 Oct;69(10):850-7.	Quantitative method
Medina-Mirapeix F, Jimeno-Serrano FJ, Escolar-Reina P, Del Baño-Aledo ME, Montilla-Herrador J, Lomas_Vega R, Franco-Sierra MA. Outpatients' perceptions of their experiences in musculoskeletal rehabilitation care. Eur J Phys Rehabil Med. 2012 Sep;48(3):475-82.	Quantitative method
Licciardone J, Gamber R, Cardarelli K. Patient satisfaction and clinical outcomes associated with osteopathic manipulative treatment. J Am Osteopath Assoc. 2002 Jan;102(1):13-20.	Quantitative method; no physiotherapy treatment (osteopathic)
Hush JM, Kirsten Cameron K, Mackey M. Patient satisfaction with musculoskeletal physiotherapy care in Australia an international comparison. J Man Manip Ther. 2012 Nov;20(4):201-8.	Quantitative method
Miao EY. Perception of patients, physiotherapists and traditional Chinese medicine practitioners towards manual physiotherapy and Tuina (Chinese manipulative therapy) in Australia a qualitative. Zhong Xi Yi Jie He Xue Bao. 2011 Jul;9(7):737-45.	No physiotherapy treatment (Tuina)
Scholte M, Calsbeek H, Nijhuis-van der Sanden MW, Braspenning J. Quality of physical therapy from a patient's perspective factor analysis on web-based survey data revealed three dimensions on patient experiences with physical therapy. BMC Health Serv Res. 2014 Jun 18;14:266.	Quantitative method
Knight PK, Cheng AN, Lee GM. Results of a survey of client satisfaction with outpatient physiotherapy care. Physiother Theory Pract. 2010 Jul;26(5):297-307.	Quantitative method
Candy E, Haworth-Booth S, Knight-Davis M. Review of the Effectiveness of a Consultant physiotherapy led muscoloskeletal interface team. Musculoskeletal Care. 2016 Sep;14(3):185-91.	Quantitative method
Hills R, Kitchen S. Satisfaction with outpatient physiotherapy a survey comparing the views of patients with acute and chronic musculoskeletal conditions. Physiother Theory Pract. 2007 Jan-Feb;23(1):21-36.	Quantitative method
Monnin D, Perneger TV. Scale to measure patient satisfaction with physical therapy. Phys Ther. 2002 Jul;82(7):682-91.	Quantitative method
Beattie PF, Nleson RM, Heintzelman M. The relationship between patient satisfaction with physical therapy care and global rating of change reported by patients receiving	Quantitative method

worker's compensation. Physiother Theory Pract. 2011 May;27(4):310-8.	
Medina-Mirapeix F, Oliveira-Sousa SL, Sobral-Ferreira M, Montilla-Herrador J, Jimeno-Serrano FJ, Escolar-Reina P. What elements of the informational, management, and relational continuity are associated with patient satisfaction with rehabilitation care and global rating change. Arch Phys Med Rehabil. 2013 Nov;94(11):2248-54.	Quantitative method
Overmeer T, Boersma K. What Messages Do Patients Remember Relationships Among Patients' Perceptions of Physical Therapists' Messages, Patient Characteristics, Satisfaction, and Outcome. Phys Ther. 2016 Mar;96(3):275-83.	Quantitative method
Rajendran D, Bright P, Bettles S, Carnes D, Mullinger B. What puts the adverse in 'adverse events' Patients' perceptions of post treatment experiences in osteopathy qualitative study using focus groups. Man Ther. 2012 Aug;17(4):305-11.	No physiotherapy treatment (osteopathic treatment)

APPENDIX 3 CASP WHITHIN THE STUDY

CASP items / Author	Screening questions		Detailed questions							
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Ali & May (2015)	Y	Y	Y	I	Y	I	Y	Y	Y	VV
Evans et al (2003)	Y	Y	Y	I	Y	I	Y	I	Y	VV
Del Baño-Aledo et al (2014)	Y	Y	Y	Y	Y	Y	Y	Y	Y	VV
Potter et al (2003)	Y	Y	Y	I	Y	I	Y	Y	Y	V
Slade et al (2009)	Y	Y	Y	Y	I	Y	Y	Y	Y	VV
Medina-Mirapeix et al (2013)	Y	Y	Y	I	Y	Y	Y	Y	Y	VV
Cooper et al (2008)	Y	Y	I	Y	I	I	I	Y	Y	VV
Hills & Kitchen (2007a)	Y	Y	Y	I	Y	I	Y	Y	Y	VV
May (2000)	Y	Y	Y	I	Y	N	Y	Y	Y	V
Waters et al (2016)	Y	Y	I	Y	Y	N	Y	Y	Y	V
Peersman et al (2013)	Y	Y	Y	Y	I	Y	Y	Y	Y	VV
Hills & Kitchen (2007b)	Y	Y	Y	Y	Y	Y	Y	Y	Y	VV
Medina-Mirapeix et al (2011)	Y	Y	Y	Y	I	I	Y	Y	Y	VV

Legend:
Y = yes; N = No; I = Can't tell; VV = considered really valuable in accordance to CASP hint;
V = considered valuable in accordance to CASP hint; NV = no valuable