Cognizance Amongphysiotherapy Clinicians and Students in Pelvic Girdle Dysfunction- Qualitative Analysis

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Abstract

Low back pain of pelvic girdle dysfunction origin is most prevalent among all age group,hence there is constant need of updates in diagnosis and therapeutic approaches,manual physiotherapy gained an adequate importance in addressing pelvic girdle dysfunctions,with an objective of understanding the awareness of pelvic girdle dysfunctions among the clinicians and students, a self-administered questionnaire was designed and administered in pre-conference workshop pelvic girdle dysfunction dogmas in diagnosis and approach at SRM college of physiotherapy SRM Institute of Science and technology Chennai India,based on the response and through the statistical analysis it was found that the awareness was lacking and there was also need to focus on the clinicians and student community towards pelvic girdle dysfunctions and its basics, this may be beneficial in enhancing better patient care services and evidence in framing up clinical practice.

Keywords: *Manual Physiotherapy; Pelvic biomechanical models; Pelvic girdle dysfunction; Physiotherapy curriculum; Structural diagnosis; Workshop survey*

Introduction

Thepainand motions in the pelvic girdle structures, had been controversial and still being debatable,particularly from sacroiliac joint and its different types of motion, after several researches and world congress on lowback and pelvic pain[(1,2)], the healthcare community accepted, that sacroiliac joint is prone to cause pain and the joints of pelvic girdle structures poses minimal motions.Researches till date had more emphasized on stability and mobility of these joints , when coming to mobility of sacroiliac joint it is still debatable and the enigma still persists.

The pelvic girdle structures are composed of three bones namely two innominates and one sacrum, the sacrum is invertedly pyramidal in shape base on above and apex on the bottom, superiorly articulates with L5 and inferiorly articulates with coccyx through sacro-coccygeal joint, sacrum has paired articular surfaces for articulating with ilium called auricular surface it is in L-shape with long and short arms, the articulation of sacrum with the ilium through sacro-iliac joint[(1)]. The innominate bone is embryologically divided into three distinct parts ilium,ischium and pubis, ilial part of innominate will articulates with sacrum through ilio-sacral joint[(1)].the pubis bone articulates with another pubis bone through symphyseal pubic joint, fibrocartilage disc is interposed between the symphyseal pubic joint[(21)]. The three bones and it's three articulation are clinically significant.

The pelvic girdle structures plays vital role in tranferring weightof upper half of the body to the lower extremities and it is an house of abdomino-pelvic visceral contents. The pelvic girdle structures are transversed by various muscles, fascia's, ligaments and neurovascular structures[(3)]. The dysfunctions of pelvic girdle structure are prone to cause locomotory dysfunctions as well as uro-gynaecological problems[(1,3,4)]. The

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physiotherapy disciplinewhich predominantly deals with the human pathokinesiological problems has anpivotal role in addressing the Pelvic Girdle Dysfunctions (PGD). The physiotherapy specialities in Orthopaedics,Obstretrics&Gynaecology,Sports and Biomechanics has wider scope in evaluating and addressing the pelvic girdle dysfunctions.

In india only few physiotherapy clinicians are evaluating and addressing PGD with manual therapy approach appropriately. Most of the physiotherapy clinicians either misdiagnose this dysfunction or address PGD symptomatically with conventional electrotherapy modalities. Ignoring these structures dysfunctions or addressing with electrotherapeutic modalities will not give long term results.conseqeunces of unaddressed malaligned structures can lead to orthopaedical problems suchs as wear and tear of hip, pes-anserinustendinitis,foot problems and etc[1,3,4,5,6] These malaligned unaddressed structures can cause range of uro-gynaecological problems such as interstitial cystitis,dysuria[3],over active pelvic floor, pudendal neuropathy[8],dyspareunia, pre menstrual syndrome ,dysmennorrhoea[4] and etc, somato visceralreflex's plays an significant role in causing uro-gynaecological problems [7]. Addressingthese malaligned structures are essential for restoring the locomotory system to normaland to intervene with uro-gynaecological problems .

The knowledge in anatomy,biomechanics, pathomechanics, structuraldiagnosis,provocating special tests and apropriate manual therapy technique is essential for diagnosing and addressing PGD. In india diagnosis and manual physiotherapy intervention in pelvic girdle dysfunction is not taught in most of the educational institutions, most of the physiotherapy clinicians and students learning appropriate diagnosis and manual therapy interventions through manual therapy courses and workshops. The clinicians and students attending the courses and workshops are less in number.

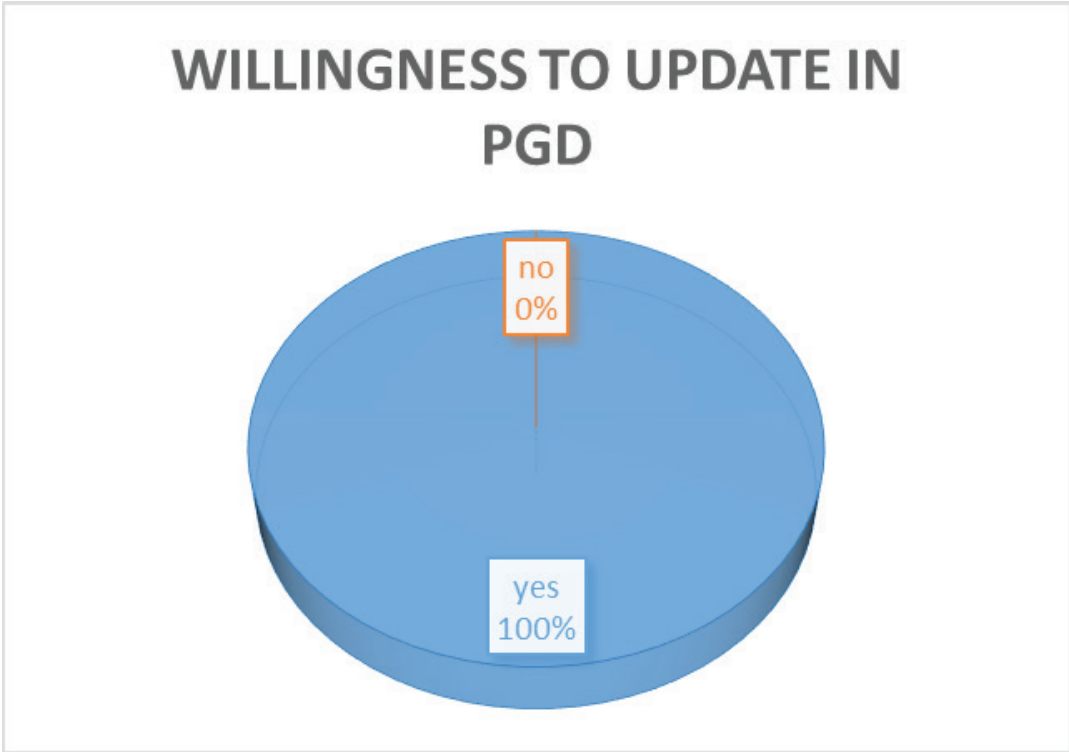
The PGD among the indian population is prevalent. The conservative management with medications and conventional physiotherapy with electrotherapy modalities, lumbo-sacral belts and exercises are not givinglongtermresults. The pelvic girdle dysfunction need to be addressed by manual therapy to realign the malaligned structures, it should be followed by motor control and sensorymotor retraining programme appropriately.Failing to realign themalaligned pelvic girdle structures with manual therapy approach can cause the "Dirty Half Dozen" in failed lower back syndrome as described by greenman[1].

Methodology & Materials

To know about the knowledge of diagnosis and management in PGD among physiotherapy clinicians and students, self administered questionnaire had been designed and distributed to the participants who participated in the one day pre-conference workshop in Pelvic Girdle Dysfunction dogmas in diagnosis and approach on EYAN international conference in recent physiotherapy updates at SRM college of physiotherapy SRM institute of science and technology on 12th December 2018.Totally 36 participants attended the workshop and the survey using the self-administered quesionnairre was conducted among this 36 participants .The questionnaire consisted 12 questions in 6 categories like 1) Willingness to update in PGD,2) Knowledge of Physiotherapy's scope in PGD, 3) Knowledge about radio-diagnosis in PGD,4) Knowledge about PGD,5) Clinical decision making in PGD,6) Knowledge about manual therapy in PGD. The questionnaire was given to the participants of workshop before the commencement of workshop and the participants were requested to fill it.

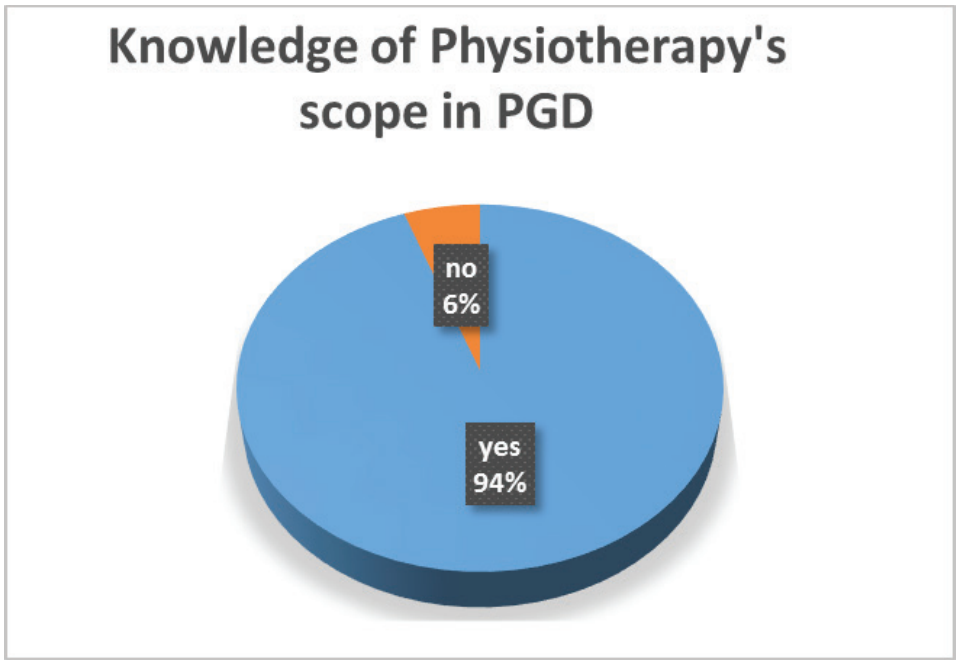
Analysis

1) Willingness to update in PGD



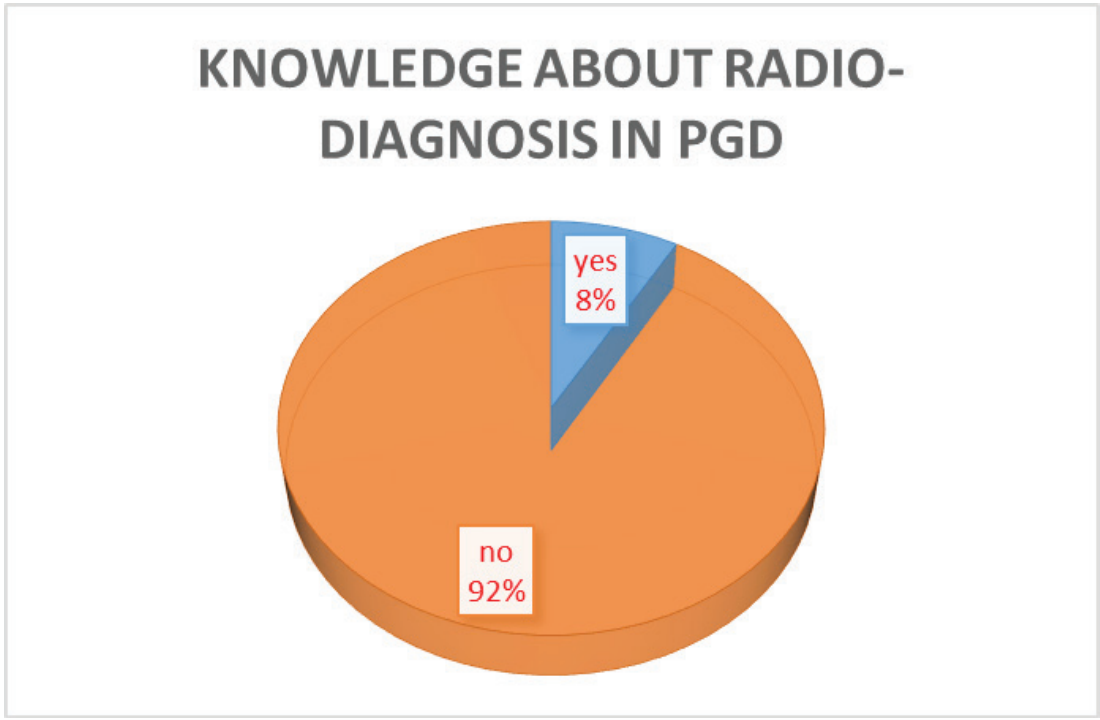
This category of question, is about the willingness to update their knowledge in PGD diagnosis and approach, for this 100% of participants had answered that they are willing to update their knowledge in PGD.

2) Knowledge of Physiotherapy's scope in PGD



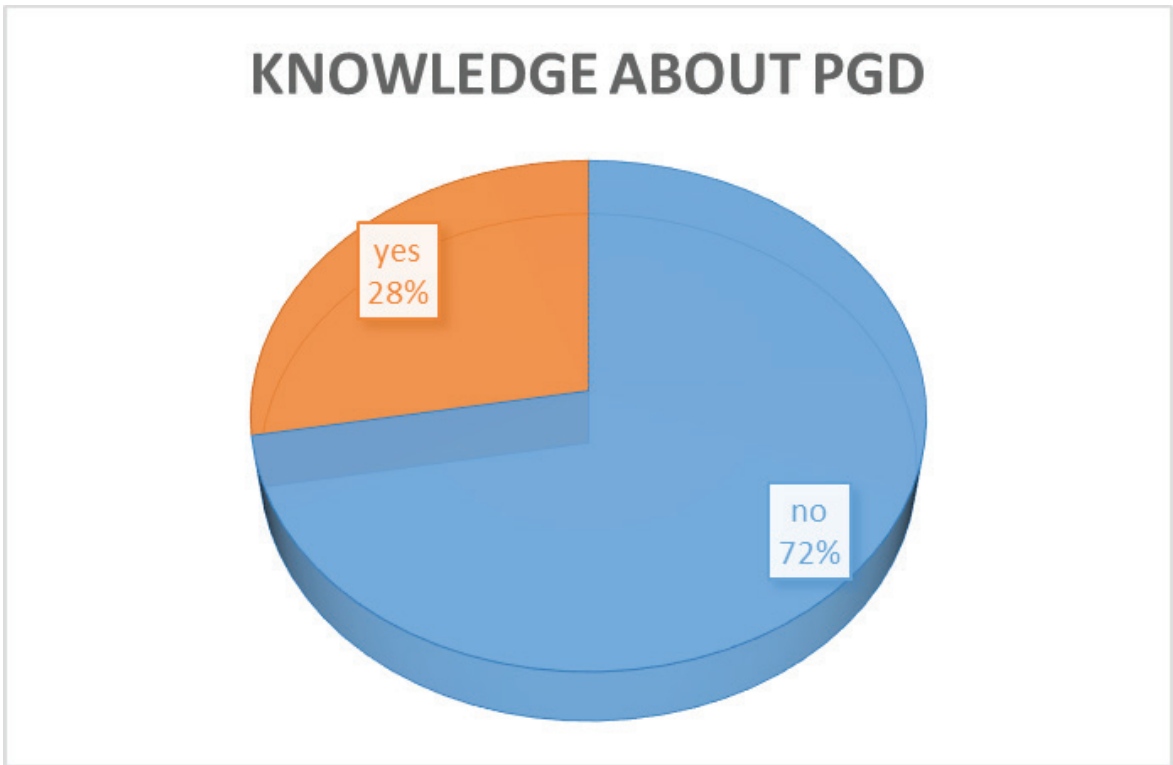
This category of question, is about the knowledge of the scope of physiotherapy in diagnosis and approach in PGD, for this 94% of participants answered that there is an scope for physiotherapy and 6% of participants answered there is no scope for physiotherapy in diagnosis and approach in PGD.

3) Knowledge about radio-diagnosis in PGD



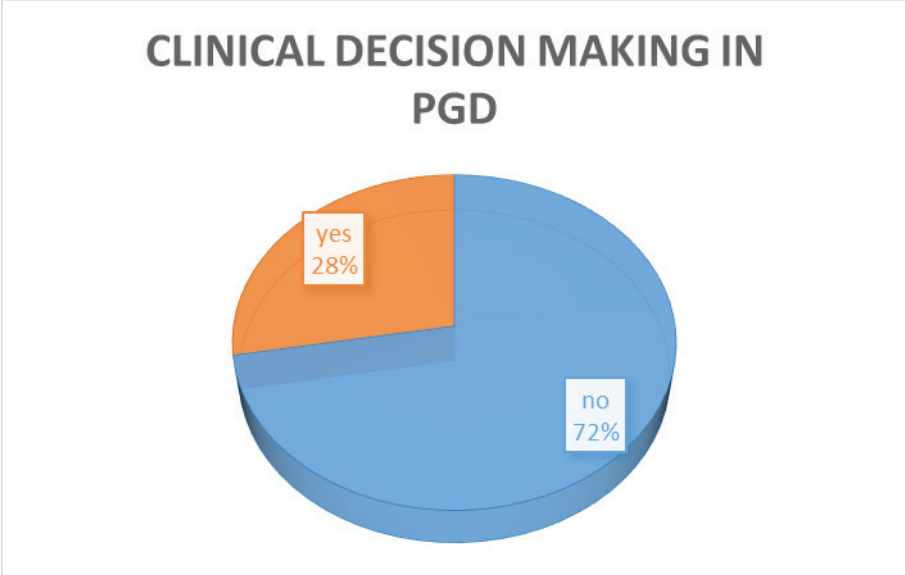
This category of question is about the radiodiagnosis in PGD,for this 92% of participants answered radio-diagnosis is needed for diagnosing PGD and 8% of participants answered radio-diagnosis is not needed for diagnosing PGD.

4) Knowledge about PGD



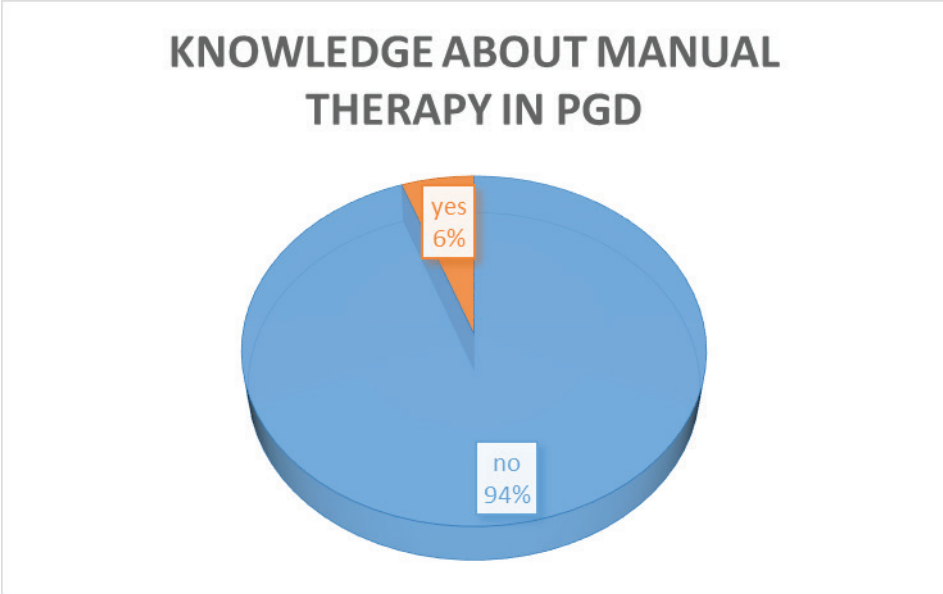
This category of question is about the fundamental knowledge about the PGD, in this 28% of participants is having fundamental knowledge about PGD and 72% of participants is not having fundamental knowledge about PGD.

5) Clinical decision making in PGD



This category of question is about the knowledge of clinical decision making in PGD. In this 28% of participants is having knowledge of clinical decision making in PGD and 72% of participants is not having knowledge of clinical decision making in PGD.

6) Knowledge about manual therapy in PGD



This category of question is about the knowledge of manual therapy in addressing PGD among the participants. In this 6% of participants is having knowledge of manual therapy in PGD and 94% of the participants is not having knowledge of manualtherapy in PGD.

Results

From the data obtained from the survey using the self-adminsteredquestionnaire. It was evident that most of the participants except those who attended previous manualtherapy workshops or courses was not familiar with the concepts of PGD diagnosis and management approach. The results of the survey are 1) Willingness to update in PGD in this category 100% of participants are willing to update their knowledge in PGD ,2) Knowledge of PT scope in PGD in this 94% of participants is revealed there is a scope for PT in PGD and 6% of participants is revealed there is no scope for PT, 3) Knowledge about radio-diagnosis in PGD in this 92% of participants is

revealed radio-diagnosis is not needed to diagnose PGD remaining 8% is revealed radio-diagnosis is needed,4) Knowledge about PGD in this 28% of participants is having fundamental knowledge about PGD and 72% is not having it,5) Clinical decision making in PGD in this 28% of participants is having knowledge of clinical decision making remaining 72% is not having it,6) Knowledge about manual therapy in PGD in this 6% of participants is having manualtherapy knowledge to address PGD and remaining 94% participants is not having it.

Discussion

The fundamental knowledge in PGD,clinical decision making and manual therapy knowledge in PGD, knowledge in these three categories among physiotherapy clinicians and students are lacking. There as an lack of knowledge in structural diagnosis of malaligned pelvic girdle structures,cluster of laslett to rule in sacroiliac joint dysfunction[9] and sacroiliac pain pattern. The lack of knowledge in Clinical Prediction Rule (CPR), sclerotomal pain pattern of sacroiliac joint,structural diagnosis of malaligned structures and in manual therapy is due to the comprehensive anatomy,complex biomechanics, less prevalence of evidence based practice. The orthopaedic manual physiotherapy is budding in india since past one decade. The orthopaedic manual physiotherapy practice is prevalent across the globe, but in india it is in infantile stage in grounds of practice, only few clinicians qualified in it and practicising it as their full time clinical practice.The population of orthopaedic manual physiotherapist in india is scarse and very few institutions across india offering orthopaedic manual therapy education because of lack of adequate number of teachers in manual therapy, henceindian physiotherapy clinician are not much into the practise of orthopaedic manual physiotherapy and for the same reason the physiotherapy students community are not much exposed to the orthopaedic manual physiotherapy. Moreover somatic dysfunctions is new to the indian physiotherapy clinicians as well as students, this somatic model belongs to osteopathic medicine, Somatic dysfunction is impaired or altered function of related components of the body framework such as skeletal, arthrodial, and myofascial structures, and the related neurovascular and lymphatic elements[1]. Structural diagnosis is evaluation of the musculoskeletal component with the objective of identifiying the presence of somatic dysfunctions,it is an part of the physical examination. Most of the manual therapy techniques are barrowed from osteopathy [16]. The one of the pioneer in Orthopedic Manual Therapy (OMT) FreddyM. Kaltenborn an physiotherapist, he was one of the founder of International federation of Manipulative Therapist (IFOMT) and now it was renamed as International Federation of Orthopaedic Manipulative Physicaltherapists (IFOMPT)[23]) it is an sub group of World confederation of Physical Therapist (WCPT)),he was the first clinician to integrate the theory and practice of orthopaedic manual medicine with osteopathy, his method of manual therapy techniques was from orthopedicmedicine,osteopathy and his own techniques [19]. The orthopaedic manual physicaltherapist'sdeepaksebastian[5], timothy flynn[20] and christopherH.wise[6] had integrated somatic dysfunction models with physicaltherapy in their authored books .The physiotherapy clinician and students in US,canada&europewho learned osteopathic school of thought in manual therapy or mixture of traditional orthopaedic manual physiotherapy and osteopathythoughts will be familiar with this somatic dysfunctions and structural diagnosis,for the physiotherapy clinicians and students in india it is new, indian physiotherapy clinicians those who completed post graduation degree in physiotherapy and postgraduate physiotherapy students are familiar with fryettes law of spinal motion but they are not familiar with pelvic biomechanical models of mitchels,chicagoand stills[22]. The american osteopathic text books advocates mitchels biomechanical pelvic model,this model is commonly used by osteopathic practioners in USA and Australia [24].These pelvic models are essential to address pelvic girdle dysfunctions, so it is necessary to include these models in physiotherapy curricullum along with the fryette law which already exist in indian physiotherapy postgraduationcurricullum. Structural diagnosis based on somatic dysfunctions have to be introduced to indian physiotherapy student community, especially when coming to pelvic girdle, because somatic dysfunctional model entails these structuresdysfunctions detaily than other school of manual therapy thoughts. Emphasis on scelorotomal pain patterns in physiotherapy curricullum from undergraduate level have to be made mandatory to make understand the pain patterns of facet joints and sacroiliac joint[18]. Introduction of

orthopaedic cluster tests[9,11] and decision making tools such as Clinical Prediction Rule (CPR)[10,11] to the indian physiotherapyclinicians and students must be made to inculcate the evidence based practice. More over including the concepts of diagnosis and manual therapy management of PGD in the books of orthopaedics,obstretrics& gynaecology ,sports physiotherapy are essential it will benefit the indian clinicians and student community.

Conclusion

Introducing the concepts in diagnosis and management of pelvic girdle dysfunction to the indian physiotherapy clinicians and students is essential to serve the patient community. Thefundamental knowledge of pelvic musculoskeletal structures and its mechanics is mandatory. The pelvic girdle dysfunctions are precursors of various orthopaedic and uro-gynaecological problem, Thepelvic girdle dysfunctions causes the affected person to cripple and it create annoyance. The diagnosis and management of pelvic girdle dysfunction is not confined to orthopaedic manual physiotherapy speciality alone, the orthopaedic manual physiotherapy is tailored with the obstretrics and gynaecological physiotherapy,sports physiotherapy and biomechanics specialization in physiotherapy. The pelvic girdle dysfunction is predominantly an orthopaedic problem, but other physiotherapy specialities has a equal scope in diagnosing and addressing the dysfunction , for an instance obstretrics and gynaecological physiotherapist is having spectrum of scope in addressing Pregnancy-related Pelvic Girdle Pain (PPGP)[17]. this PPGP can be addressed by realigning the malaligned pelvic girdle structures withimplusive techniques (thrust techniques) and non-impulsive techniques (non-thrust techniques) such as articular technique and muscle energy technique[7,12,13,14] and range of urogynaecological problem can be addressed with manual approach to pelvic girdle structures, the articular dysfunction (malalignment) in sacroiliac joint may aggravate the source of myofascial trigger points in pelvic floor muscles[15]. In sports physiotherapy ranging from groin pains,gluteul muscle inhbition[1] and etc can be addressed.In biomechanics there is lot of scope in biomechanically analysis of pelvic girdle structures. There is an spectrum of scope in these physiotherapy specialities in diagnosing, addressing and researching in pelvic girdle structures. Includingrecent evidence based concepts in diagnosis and management of pelvic girdle structures in physiotherapy curricullum will help the student community as well as clinicians and it increases the cognizance of pelvic girdle dysfunctionsamong them to serve the patient population.

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