

EVALUATION OF RISK FACTORS OF COCCYDYNIA IN MIDDLE- AGED FEMALES

Shruti kumbhar

Physiotherapy intern, Krishna college of physiotherapy, krishna Vishwa Vidyapeeth

Email ID : kshruti1608@gmail.com

Dr. G. Varadharajulu

Dean, Department of physiotherapy, Krishna college of physiotherapy, karad satara, maharashtra

Email ID: deanphysiotherapy@kvv.edu.in

CORRESPONDING AUTHORS: Dr. G. Varadharajulu

DOI: 10.63001/tbs.2025.v20.i01.S.I(1).pp155-157

KEYWORDS

Coccydynia, females, risk factors

Received on:

04-05-2025

Accepted on:

07-06-2025

Published on:

10-07-2025

ABSTRACT

Introduction Coccydynia in middle age females has been increased in recent years. Coccydynia is a pain at the tailbone. This pain occurs due to many reasons like obesity, post-partum period, pregnancy, trauma, long sitting. The aim of this study was to evaluate the risk factors of coccydynia in middle age females. **Method** This was a 'conventional sampling method' that consisted of 100 participants and they were selected on the basis of inclusion and exclusion criteria. The data that was collected which includes demographic data and questionnaire. Questionnaire was given to all participants and collect the data.

Result Based on statistical analysis it was found that there are many risk factors of coccydynia in middle age females but the postpartum period of female has more risk of developing coccyx pain 40% females has chance to develop coccyx pain due to postpartum period. obesity, long sitting professions, trauma are the other risk factors for the condition.

Conclusion The study concluded that postpartum factors are the leading cause of coccydynia in middle-aged females, followed by lifestyle-related factors like long sitting and obesity. postnatal care, ergonomics, weight management, and trauma prevention is essential for effective evaluation and management of coccydynia in this population.

INTRODUCTION

Coccydynia, also known as coccygodynia, is discomfort in the coccyx. Although the phrase was first used by Simpson in 1859, coccygeal pain is complex pain, treating it can be challenging. It has a wide range of physiological and psychological causes. The majority of coccydynia patients go away in a few weeks to months, either with or without conservative treatment. The final portion of the spine is called the coccyx. coccyx bone similarly looks like cuckoo bird's beak when viewed from the side, the name "coccyx" is derived from the Greek word for the bird's beak. The greatest segment of the triangular coccyx articulates with the lowest sacral segment, while the other three to five segments are fused together.¹

Thiele was the first to describe the condition clinically, and this description is still accurate today. In the lower sacrum or coccygeal regions, patients typically feel a sharp shooting or occasionally agonising pain, particularly when they sit on hard, flat surfaces. From little, sporadic pain to terrible pain that interferes with everyday activities, pain can vary widely in intensity. In women, the premenstrual phase is frequently linked to an exaggerated.¹

Coccydynia is most frequently caused by internal or external trauma. Together with the ischial tuberosities, the coccyx serves

as the tripod's third leg, offering stability when seated. However, because of its unusual placement, it is more likely to sustain damage in the event of an external trauma, like a backward fall that injures the coccyx. According to published research, 50-65% of coccydynia patients had an antecedent history of physical trauma.²

The causes of coccyx pain can range from trauma, repeated strikes or prolonged contact with a hard surface, falling on the buttocks, intrapartum trauma, or idiopathic causes to non-traumatic joint disorders, degenerative, infectious, neoplastic disorders, pelvic floor muscle spasms, after spinal or rectal interventions, after an epidural injection, psychological causes, and coccygeal morphology.²

The following factors contribute to its onset, between 30 and 50, presence of bony spicule, hypermobile coccyx, and short perineum in a woman in difficult labour; obesity (3 times higher risk), abrupt weight loss, female sex (4 times higher risk). Pregnant women who experience coccyx pain are unable to carry out their everyday tasks, which significantly lowers their quality of life. People who experience pain and their families are affected physically, socially, and behaviourally. In addition to causing sexual, rectal, and urogynecological problems, it can also have an

impact on interpersonal relationships, the psychosocial relationship, and even the ability to work.³

According to the study's findings, postpartum women are most likely to experience coccydynia. Additionally, there was a substantial correlation between coccydynia and the delivery method, the less painful position, and the level of pain experienced during childbirth.⁴

Most patients have found that non-operative treatments like physiotherapy, analgesics, laxatives, hot baths, cushions, shockwave ultrasound therapy, and ganglion impar blocks work well. It has been demonstrated that radiofrequency thermocoagulation of the ganglion impar improves pain scores. When conservative approaches fail, patients are directed to experts for well-established treatment procedures such as coccygectomy, manipulation under anaesthesia (MUA), or local steroid injections.⁵

METHOD

The observational study was carried in 100 participants. The study was carried out by sending google forms from different social

media platforms. We questioned the patient and checked about knowledge and causes of risk factors of coccydynia in middle aged females. the question were started with risk factors, BMI, occupation, trauma injuries etc.

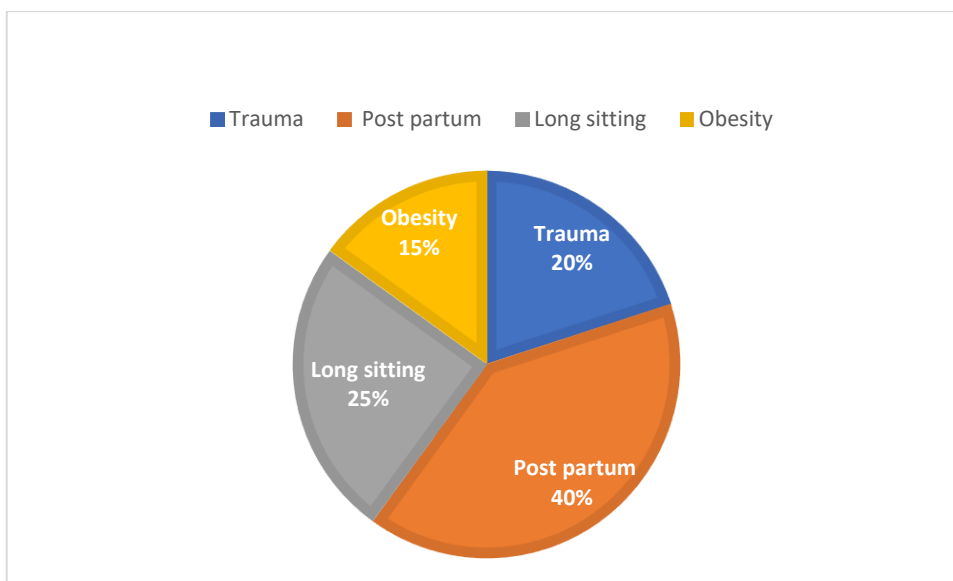
Inclusion criteria Gender: Female, Age: 25 to 35years female, Post-partum women, obesity, trauma injuries, Long sitting professions.

Exclusion criteria Non cooperative patients, Patient with normal BMI, Patient with other comorbidities, Females below age 25, Females above age 35

ETHICAL COMMITTEE APPROVAL

A study was approved by the Institutional Ethics Committee of Krishna Vishwavidyalaya Deemed to be University, Karad. An explanation about the study and questionnaire was given to participants and informed consent was obtained from them. They also had authority to not participate in the questionnaire based study. All the participants participated voluntarily and their confidently was maintained throughout the study.

RESULT



This pie chart represents the distribution of contributing factors to coccydynia in middle-aged female patients. Coccydynia, or tailbone pain, can arise due to various causes, and the data

illustrates how commonly each factor is associated with this condition in your sample

Causative Factor	Percentage (%)	Frequency (n = 100)
Postpartum	40%	40 participants
Long Sitting	25%	25 participants
Trauma	20%	20 participants
Obesity	15%	15 participants

Postpartum period

This is the most prevalent cause, accounting for nearly half of the cases.

40% population suffer from coccydynia because of the post-partum period

Long sitting

This is the second most common cause. 25% population suffer from coccydynia because of long sitting professions

It may be more common among women with sedentary jobs or limited mobility.

Trauma

Trauma is a well-established cause of coccydynia.

20% population suffer from coccydynia because of trauma injury.

Obesity

Increased body weight can change pelvic tilt and sitting posture, placing excessive strain on the coccyx.

15% population suffer from coccydynia because of obesity

DISCUSSION

Coccydynia, or pain in the coccyx region, is a frequently underdiagnosed condition, particularly among middle-aged

females, due to social hesitation and misattribution of symptoms. The current analysis highlights four major contributing factors. postpartum status (40%), long sitting (25%), trauma (20%), and obesity (15%).

Postpartum-related coccydynia was found to be the most prevalent factor in this study. Vaginal childbirth often leads to coccygeal subluxation, fracture, or ligament strain due to downward pressure of the fetal head during delivery. Additionally, pregnancy-induced ligamentous laxity due to hormones like relaxin may predispose the coccyx to injury during labor.⁶

Long sitting, particularly on hard surfaces or without proper back support, was the second most reported cause. This aligns with the modern trend of sedentary lifestyles, especially among office workers and homemakers. Prolonged pressure leads to ischemic changes and inflammation of the sacrococcygeal structures.⁷

Traumatic coccydynial pain typically results from falls or direct blows to the coccyx. the high prevalence of luxation or hypermobility of the coccyx following trauma. They also advocated the use of dynamic radiographs to identify instability in traumatic cases. A study discuss about the symptoms like Pain

or tenderness in the lower back, Pain on top of the buttocks area, Pain or numbness with sitting, Bruising and swelling around the base of the spine. Traumatic coccydynial pain can be very painful and slow to heal. Healing time for an injured tailbone depends on the severity of the injury.⁸

Excess body weight increases mechanical load on the coccyx and alters pelvic posture, increasing vulnerability to pain. study further shows that patients with a BMI of more than 30 respond less favourably to treatment.⁵

The dominance of postpartum and sedentary causes indicates the importance of targeted postnatal musculoskeletal care and ergonomic education. Traumatic and obesity-related cases underline the need for early intervention and rehabilitation. With 80% of causes being non-traumatic and potentially modifiable, prevention strategies such as ergonomic training, weight management, and postpartum rehabilitation can significantly reduce the burden.

CONCLUSION

This study concludes that postpartum changes are the most common cause of coccydynia in middle-aged females, followed by prolonged sitting, trauma, and obesity. The findings highlight that 80% of cases are linked to modifiable factors, indicating a strong need for early screening, especially in postnatal women, and lifestyle modifications. Emphasis should be placed on ergonomic education, weight management, and physiotherapy-based interventions. The results underline the importance of a multidisciplinary approach for effective prevention and management.

REFERENCES

- Lirette LS, Chaiban G, Tolba R, Eissa H. Coccydynia: an overview of the anatomy, etiology, and treatment of coccyx pain. *Ochsner Journal*. 2014 Mar 20;14(1):84-7.
- Garg B, Ahuja K. Coccydynia-A comprehensive review on etiology, radiological features and management options. *Journal of Clinical Orthopaedics and Trauma*. 2021 Jan 1;12(1):123-9.
- Márquez-Carrasco ÁM, García-García E, Aragúndez-Marcos MP. Coccyx pain in women after childbirth. *Enfermería Clínica (English Edition)*. 2019 Jul 1;29(4):245-7.
- Arif A, Sardar S, Gilani MF, Muneer R, Naz A, Manzoor N, Kashif M. Prevalence of Coccydynia Among Postpartum Women: Prevalence of Coccydynia Among Postpartum Women. *Pakistan Journal of Health Sciences*. 2022 Dec 31:108
- .Kodumuri P, Raghuvanshi S, Bommireddy R, Klezl Z. Coccydynia-could age, trauma and body mass index be independent prognostic factors for outcomes of intervention?. *The Annals of The Royal College of Surgeons of England*. 2017 Jan;100(1):12-5.
- Li M, Li D, Bu J, Zhang X, Liu Y, Wang H, Wu L, Song K, Liu T. Examining the factors influencing postpartum musculoskeletal pain: a thorough analysis of risk factors and pain assessment indices. *European Spine Journal*. 2024 Feb;33(2):517-24.
- Alaca N, Acar AÖ, Öztürk S. Low back pain and sitting time, posture and behavior in office workers: A scoping review. *Journal of Back and Musculoskeletal Rehabilitation*. 2025 Mar 20:10538127251320320.
- National library of medicine, Tailbone trauma - aftercare
- Vishnu P, Jagatheesan A, Dasarapu I. Coccydynia and disability on postpartum vaginal delivery women. *INTI JOURNAL*. 2022;2022(07):1-5.
- Shah S, Muzammil S, Khalid G, Javed R, Ahmed D, Altaf F, Khalid A. The Prevalence of Coccydynia among Postpartum Females in Allama Iqbal Memorial Teaching Hospital, Sialkot: Prevalence of Coccydynia among Postpartum Females. *The Therapist (Journal of Therapies & Rehabilitation Sciences)*. 2023 Mar 31:66-9.
- Neville CE, Carrubba AR, Li Z, Ma Y, Chen AH. Association of coccygodynia with pelvic floor symptoms in women with pelvic pain. *PM&R*. 2022 Nov;14(11):1351-9.
- Kara D, Pulatkan A, Ucan V, Orujov S, Elmadag M. Traumatic coccydynia patients benefit from coccygectomy more than patients undergoing coccygectomy for non-traumatic causes. *Journal of Orthopaedic Surgery and Research*. 2023 Oct 27;18(1):802.
- Howard PD, Dolan AN, Falco AN, Holland BM, Wilkinson CF, Zink AM. A comparison of conservative interventions and their effectiveness for coccydynia: a systematic review. *Journal of Manual & Manipulative Therapy*. 2013 Nov 1;21(4):213-9.
- Skalski MR, Matcuk GR, Patel DB, Tomasian A, White EA, Gross JS. Imaging coccygeal trauma and coccydynia. *Radiographics*. 2020 Jul;40(4):1090-106.
- Abdel-Aal NM, Elgohary HM, Soliman ES, Waked IS. Effects of kinesiotaping and exercise program on patients with obesity-induced coccydynia: a randomized, double-blinded, sham-controlled clinical trial. *Clinical rehabilitation*. 2020 Apr;34(4):471-9.