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Prevalence of Coccydynia Among Prolonged Bedridden Patients: A Cross-Sectional Study

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Abstract

Background: Coccydynia is characterized by pain in the coccygeal (tailbone) region and is commonly associated with prolonged pressure, trauma, or repetitive stress. Patients who remain bedridden for extended periods may be at an increased risk of developing coccydynia due to sustained pressure over the coccyx. However, limited evidence is available regarding its prevalence among patients who are bedridden for prolonged periods. This study aimed to determine the prevalence of coccydynia among patients who had been on bed rest for 10 days or longer.

Aim: This study aims to determine the prevalence of coccydynia among patients who remain on bed rest for 10 days or longer.

Objective: The objective of this study is to evaluate the proportion of bedridden patients (≥10 days) who report coccyx/tailbone pain; to assess the intensity of coccyx pain using a standardized pain scale, the Numeric Pain Rating Scale (NPRS); and to observe whether coccyx pain is associated with pressure-related tenderness or skin risk signs in the coccygeal region.

Methods: A descriptive cross-sectional study was conducted among 100 prolonged bedridden patients admitted to the orthopedic, cardiopulmonary, and surgical wards of a tertiary care hospital. Participants aged 18 years or older who had remained on bed rest for at least 10 days were recruited using a convenience sampling technique. Data were collected using a self-structured questionnaire to assess demographic characteristics, duration of bed rest, coccygeal pain, tenderness, and related clinical findings. Pain intensity was evaluated using the NPRS. Descriptive statistics, including frequencies and percentages, were used for data analysis.

Results: Among the 100 participants, 61 (61%) reported coccydynia, while 39 (39%) had no coccygeal pain. The highest prevalence was observed among patients with cardiopulmonary conditions (N = 20/30, 66.7%), followed by those with surgical conditions (N = 13/22, 59.1%) and orthopedic conditions (N = 28/48, 58.3%). Coccydynia was more common in males than in females and was most frequently observed in the 45-60-year age group. According to the NPRS, moderate pain was the most frequently reported pain severity, and tenderness over the coccygeal region was commonly associated with coccydynia.

Conclusion: Coccydynia was present in 61% of the prolonged bedridden patients, affecting more than half of the study population. The findings highlight the importance of routine assessment, early identification, regular repositioning, and pressure-relieving strategies to reduce coccygeal pain and improve patient comfort during prolonged bed rest.

Categories: Physical Medicine & Rehabilitation, Orthopedics, Epidemiology/Public Health
Keywords: bedridden patients, coccydynia, coccyx pain, cross-sectional study, hospitalized patients, nprs, pressure injury, prevalence, prolonged bed rest

Introduction

Coccydynia, also known as coccygodynia, is a painful condition affecting the coccygeal region at the lower end of the vertebral column. The coccyx serves as an attachment site for several muscles, ligaments, and tendons and contributes to weight-bearing while sitting. Pain in this region can interfere with sitting, mobility, and daily activities, thereby reducing patient comfort and functional ability [1]. Radiological assessment plays an important role in the evaluation of coccydynia. Standardized imaging techniques can help identify abnormalities in coccygeal morphology and mobility, thereby supporting accurate diagnosis and appropriate management [2]. The etiology of coccydynia is multifactorial. Previous studies have reported that trauma, degenerative changes, repetitive microtrauma, and mechanical stress are common contributing factors to coccygeal pain [3]. Clinical evidence has also highlighted the importance of identifying underlying pathology to guide appropriate treatment and improve patient outcomes [4]. Clinical assessment of coccygeal and lumbosacral pain should also consider the possibility of serious underlying pathology, as symptoms may sometimes be associated with conditions other than routine mechanical pain

[5]. Anatomical and biomechanical alterations affecting the coccyx have also been recognized as important factors in the development and persistence of coccydynia [6]. Furthermore, persistent spinal pain has been documented even after lumbar spine surgery, highlighting the complexity of spinal pain presentations and the importance of appropriate clinical assessment [7].

Patients admitted to orthopedic, cardiopulmonary, and surgical wards may require prolonged bed rest because of their medical conditions or postoperative recovery. Prolonged immobilization requires appropriate repositioning and pressure redistribution to reduce the risk of pressure-related complications [8]. Continuous pressure over the coccygeal region may contribute to discomfort during prolonged periods of immobility. Previous research has demonstrated the occurrence of coccydynia among wheelchair users who remain seated for prolonged periods, suggesting that sustained mechanical pressure over the coccyx may be an important contributing factor [9]. Similarly, postpartum women have also been reported to experience coccydynia, possibly due to increased biomechanical stress and pressure on the coccygeal region during childbirth [10]. Although coccydynia has been investigated in several populations, limited evidence is available regarding its occurrence among prolonged bedridden patients. Therefore, the present study was undertaken to determine the prevalence of self-reported coccygeal-region pain among patients who had remained on bed rest for 10 days or longer. Pain intensity was also recorded using the Numeric Pain Rating Scale (NPRS) [11], and selected demographic and clinical characteristics associated with self-reported coccygeal-region pain were examined.

Materials And Methods

Study design

A descriptive cross-sectional study was conducted to determine the prevalence of coccydynia among prolonged bedridden patients. The study was conducted from March 2026 to July 2026 (five months) in the orthopedic, cardiopulmonary, and surgical wards of a tertiary care hospital. The study was approved by the Krishna Vishwa Vidyapeeth Institutional Ethics Committee (approval no.: 484/2025-2026; approval date: February 27, 2026).

Study population and sampling

The minimum required sample size for the study was 71 participants, as approved by the institutional research committee. The sample size was calculated using Cochran's formula, considering an expected prevalence of 75% based on a previously published study on coccydynia among wheelchair users due to prolonged sitting. A total of 100 eligible participants were included in the present study. Participants were recruited using a convenience sampling technique. The study included adult patients aged 18 years and above who had remained on continuous bed rest for 10 days or longer and fulfilled the eligibility criteria. Written informed consent was obtained from all participants before their inclusion in the study. During the study period from March 2026 to July 2026, a total of 100 patients were screened for eligibility. All 100 patients fulfilled the inclusion criteria and agreed to participate in the study after providing written informed consent. No screened patients were excluded or refused participation. All 100 enrolled participants underwent data collection and clinical assessment. For the purpose of this study, prolonged bed rest was operationally defined as remaining on bed rest for at least 10 consecutive days. Participants were permitted to sit on the bed and perform necessary bed-level activities; however, standing and walking were not permitted during this period. The inclusion and exclusion criteria used for participant selection are presented in Table *1*.

Inclusion criteria	Exclusion criteria
Adult patients aged 18 years or older.	Patients with a previous history of coccygeal fracture.
Patients who had remained on bed rest for 10 consecutive days or more, with sitting on the bed and transfers permitted but standing and walking prohibited.	Patients with severe cognitive impairment.
Patients willing to participate after providing written informed consent.	Patients unable to communicate effectively.
	Patients who declined to participate in the study.

TABLE 1: Inclusion and exclusion criteria for participant selection

Participant recruitment and selection

A total of 100 patients were screened for eligibility, and all 100 met the inclusion criteria. All 100 patients

were willing to participate and provided informed consent. All 100 participants were assessed and included in the final analysis (Figure *1*).

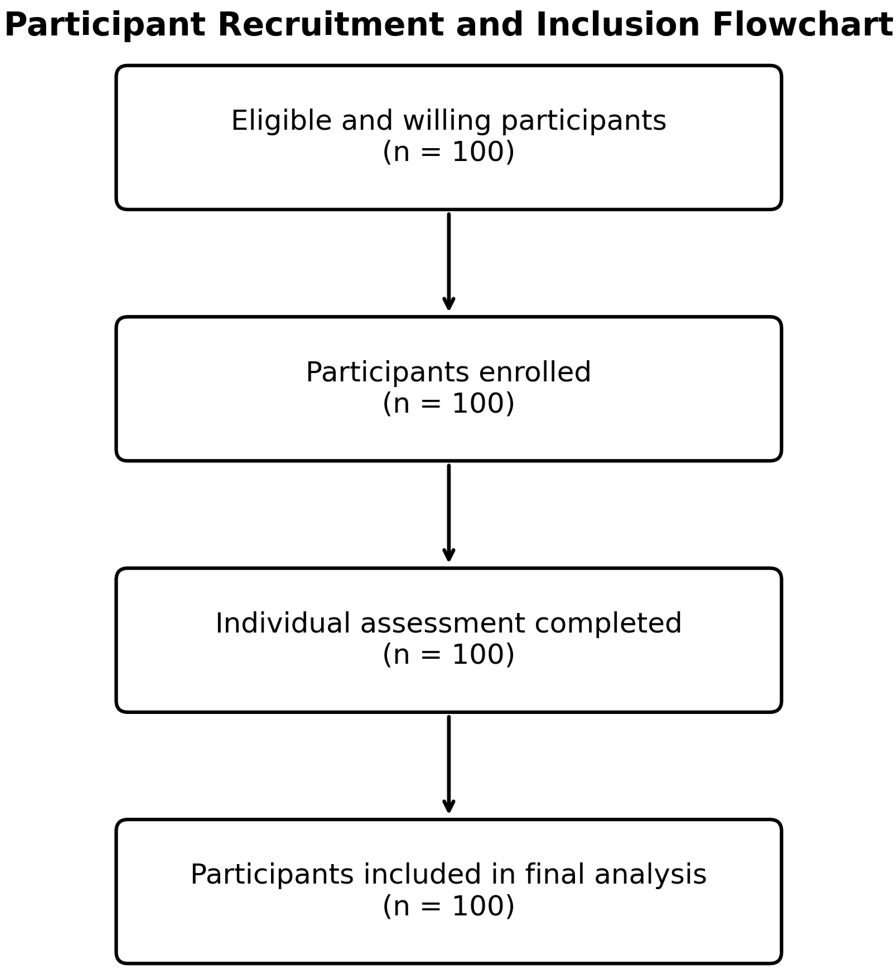


FIGURE 1: Participant recruitment flowchart

Data collection

Data were collected using an investigator-developed structured questionnaire prepared for the present study. The questionnaire was reviewed by the Heads of Departments (HODs), and their approval was obtained with signatures. It was available in both English and Marathi to facilitate participant understanding. Pilot testing was not performed, and the questionnaire was not formally validated. Therefore, its diagnostic accuracy for establishing coccydynia was not established. The questionnaire included demographic details, clinical information, duration of bed rest, self-reported presence or absence of coccygeal pain, associated local signs and symptoms, and the impact of pain on comfort, sleep, and participation in physiotherapy. Participants were assessed individually by the investigator after obtaining written informed consent. Self-reported coccygeal pain was recorded separately from tenderness elicited during clinical examination. Clinical examination included direct palpation of the coccygeal region with the participant in the side-lying position to identify tenderness. Local palpation is a commonly described component of the clinical examination of patients with coccygeal pain [1,12]. The examination also included observation for local signs such as redness, swelling, increased warmth, and pressure sores in the coccygeal or sacral region. Pain intensity was recorded using the NPRS, ranging from 0 (no pain) to 10 (worst possible pain) [11]. The NPRS was recorded for every participant, including those reporting no pain. All collected information was documented systematically. The investigator-developed questionnaire used for data collection is provided in Appendix 1. The presence or absence of coccygeal pain was determined using questionnaire item P1, which directly asked participants whether they experienced tailbone pain. Individual questionnaire items were recorded separately. Although a composite score was calculated, it was not used to determine the prevalence of coccydynia or for clinical diagnostic interpretation. A positive response to the tailbone-pain question was classified as self-reported coccygeal-region pain. This screening definition identified the presence of pain in the coccygeal region but did not establish its specific anatomical source or underlying cause.

Outcome measures

The primary outcome measure was the prevalence of self-reported coccygeal pain among prolonged bedridden patients. Prevalence was determined by recording the presence or absence of coccygeal pain reported by participants using the corresponding questionnaire item. The additional outcome measures included pain intensity, which was recorded using the NPRS, ranging from 0 to 10. The NPRS is a commonly used pain-rating tool for quantifying pain intensity [11]. It was used to describe pain severity and was not used to determine the prevalence of coccygeal pain.

Coccygeal Tenderness

Tenderness over the coccygeal region was assessed separately through direct palpation in the side-lying position. Palpation for localized coccygeal tenderness is described as part of the clinical examination of coccygeal pain [1,12].

Local Signs

The presence of redness, swelling, increased warmth, and pressure sores in the coccygeal or sacral region was examined and documented.

Impact of Pain

The reported impact of coccygeal pain on comfort, sleep, and participation in physiotherapy was documented using the investigator-developed questionnaire.

Demographic and Clinical Distribution

The distribution of reported coccygeal pain was examined according to age, gender, duration of bed rest, and primary clinical condition. The NPRS provided a numerical description of pain intensity, whereas the presence or absence of self-reported coccygeal pain was used to calculate prevalence. The questionnaire and clinical examination findings were used to describe associated symptoms and clinical observations. The diagnostic validity of the questionnaire and clinical assessment as a combined diagnostic method was not established.

These selected demographic and clinical variables were examined to describe the distribution of self-reported coccygeal-region pain among the study participants and were considered for descriptive analysis; however, they were not used to establish causal relationships. The study design and methodology are summarized in Table *1*.

Statistical analysis

The collected data were entered into Microsoft Excel 2019 MSO (Version 2508, Build 16.0.19127.20302, 64-bit; Microsoft Corp., Redmond, WA) for analysis. Descriptive statistics were used to summarize the findings. As this was a descriptive prevalence study, the data were expressed as frequencies (N) and percentages (%). The prevalence of coccydynia was calculated using the following formula:

$$\text{Prevalence } (\%) = \frac{\text{Number of patients with coccydynia}}{\text{Total number of participants}} \times 100$$

A summary of the study design and methodology is given in Table *2*.

Steps	Description
Study design	Descriptive cross-sectional study.
Study setting	Orthopedic, cardiopulmonary, and surgical wards of a tertiary care hospital.
Study duration	March 2026 to July 2026 (5 months).
Sampling technique	Convenience sampling.
Sample size	Sample size - minimum calculated sample size: 71 participants; actual sample size: 100 prolonged bedridden patients.
Inclusion criteria	Patients aged ≥ 18 years, on bed rest for ≥10 days, willing to participate, and provided written informed consent.
Exclusion criteria	Previous coccygeal fracture, severe cognitive impairment/inability to communicate, and refusal to participate.
Data collection tool	Self-structured questionnaire and the Numeric Pain Rating Scale (NPRS) for pain assessment.
Primary outcome	Prevalence of coccydynia.
Secondary outcome	Pain intensity (NPRS), presence of coccygeal tenderness, and distribution of coccydynia according to age, gender, duration of bed rest, and primary clinical condition (orthopedic, cardiopulmonary, or surgical).
Statistical analysis	Data were analyzed using Microsoft Excel 2019 MSO (Version 2508, Build 16.0.19127.20302, 64-bit). Descriptive statistics were expressed as frequencies (N) and percentages (%).

TABLE 2: Summary of the study design and methodology

Results

A total of 100 prolonged bedridden patients participated in the study. The results of the study are presented below to describe the prevalence and distribution of coccydynia among prolonged bedridden patients. The findings include age, gender, duration of bed rest, clinical condition, pain severity, and tenderness.

Among the 100 prolonged bedridden patients included in the study, self-reported coccygeal-region pain was present in 61 participants (61.0%; 61/100; Wilson 95% CI: 51.2%-70.0%), while 39 participants (39.0%) did not report coccygeal pain. These findings describe the occurrence of self-reported coccygeal-region pain among the study participants and should not be generalized beyond this sample because of the use of convenience sampling (Table 3).

Coccydynia status	N (%)
Present	61 (61%)
Absent	39 (39%)
Total	100 (100%)

TABLE 3: Prevalence of coccydynia among bedridden patients (n = 100)

Age-wise analysis showed that the highest number of participants reporting self-reported coccygeal-region pain belonged to the 46-60-year age group (35/61; 57.4%). However, the highest within-group proportion was observed in the 31-45-year age group (16/23; 69.6%), followed by the 18-30-year age group (10/16; 62.5%) and the 46-60-year age group (35/61; 57.4%). The differences in these proportions describe the

distribution of reported pain across age groups but do not establish age as a causal or independent risk factor (Table 4).

Age group (years)	Coccydynia present (n)	Coccydynia absent (n)	Total
18-30	10 (62.5%)	6 (37.5%)	16 (100%)
31-45	16 (69.6%)	7 (30.4%)	23 (100%)
46-60	35 (57.4%)	26 (42.6%)	61 (100%)

TABLE 4: Age-wise distribution of coccydynia

Gender-wise analysis showed that self-reported coccygeal-region pain was reported by 42 of 55 male participants (76.4%) and 19 of 45 female participants (42.2%). Thus, the proportion of participants reporting coccygeal-region pain was higher among males than females in the present sample. These findings represent the observed distribution within the study population and do not establish gender as an independent risk factor for coccygeal-region pain (Table 5).

Gender	Coccydynia present (n)	Coccydynia absent (n)
Male	42 (68.9%)	13 (33.3%)
Female	19 (31.1%)	26 (66.7%)

TABLE 5: Gender distribution of coccydynia

Analysis of bed rest duration showed that most patients with coccydynia had been bedridden for 10-15 days (52 patients, 85.2%). Coccydynia was also observed among patients with longer durations of bed rest, including five patients (8.2%) in the 16-20-day group, two patients (3.3%) in the 21-25-day group, and two patients (3.3%) with bed rest duration greater than 25 days. This finding suggests that coccydynia can occur even during the early period of prolonged immobilization (Table 6).

Bed rest duration	Present (n)	Absent (n)	Total (n)
10-15 days	52 (85.2%)	39 (100%)	91 (91%)
16-20 days	5 (8.2%)	0 (0%)	5 (5%)
21-25 days	2 (3.3%)	0 (0%)	2 (2%)
>25	2 (3.3%)	0 (0%)	2 (2%)

TABLE 6: Distribution according to duration of bed rest

Analysis according to primary clinical condition showed that the highest within-group proportion of self-reported coccygeal-region pain was observed among cardiopulmonary patients (20/30; 66.7%), followed by surgical patients (13/22; 59.1%) and orthopedic patients (28/48; 58.3%). The higher proportion observed in the cardiopulmonary group may be related to differences in the underlying clinical conditions and hospitalization-related factors. However, these factors were not independently evaluated, and the observed differences should be interpreted descriptively rather than as evidence of a causal relationship (Table 7).

Clinical condition	Present	Absent	Total
Orthopedic	28 (58.3%)	20 (41.7%)	48 (100%)
Cardiopulmonary	20 (66.7%)	10 (33.3%)	30 (100%)
Surgical	13 (59.1%)	9 (40.9%)	22 (100%)

TABLE 7: Distribution according to clinical condition

The NPRS was used to quantify pain intensity among the study participants and was not used to determine the prevalence of coccydynia. Of the 100 participants, 39 (39%) reported no pain (NPRS score 0), while 16 (16%) reported mild pain, 28 (28%) reported moderate pain, and 17 (17%) reported severe pain. Moderate pain was the most frequently reported pain intensity among the participants (Table *8*).

NPRS severity	Frequency	Percentages
No pain	39	39%
Mild	16	16%
Moderate	28	28%
Severe	17	17%

TABLE 8: Distribution of coccydynia according to NPRS severity

NPRS: Numeric Pain Rating Scale.

Tenderness over the coccygeal region was observed in 57 patients (57%). Among them, 48 patients (84.2%) had associated coccydynia, while nine patients (15.8%) reported tenderness without coccygeal pain. Additionally, 13 patients (30.2%) reported coccydynia without tenderness. These findings suggest that tenderness was commonly associated with coccydynia among prolonged bedridden patients (Table *9*).

Tenderness status	Coccydynia present	Coccydynia absent
Tenderness present	48 (84.2%)	9 (15.8%)
Tenderness absent	13 (30.2%)	30 (69.8%)

TABLE 9: Association between tenderness and coccydynia

Discussion

The present study investigated the prevalence of coccydynia among prolonged bedridden patients who had remained on bed rest for 10 days or longer. The findings demonstrated that 61% of the participants experienced coccygeal pain, indicating that coccygeal pain was common in this study population. Prolonged immobilization may increase continuous pressure over the coccygeal region, potentially contributing to pain and discomfort, particularly when movement and pressure-relieving measures are limited. The highest number of patients with coccydynia belonged to the 46-60-year age group. This observation may be associated with age-related changes in musculoskeletal tissues, reduced tissue resilience, and underlying medical conditions that require prolonged hospitalization. However, as the present study was descriptive, a causal relationship between age and coccydynia cannot be established [1,6]. Gender-wise analysis showed a higher occurrence of coccydynia among male participants than female participants. Although the present study demonstrated this pattern, the reasons for this difference remain unclear. Variations in the distribution of the study population, underlying clinical conditions, or duration of bed rest may have influenced these findings. Further analytical studies are required to determine whether gender is an independent risk factor for coccydynia. Among the different clinical conditions, the prevalence of coccydynia was highest among patients admitted to the cardiopulmonary wards. These patients may require

prolonged immobilization because of respiratory or cardiovascular compromise, potentially resulting in sustained pressure over the coccygeal region. Similarly, persistent spinal pain syndrome has been documented in patients even after lumbar spine surgery, highlighting that spinal pain may persist despite treatment of the underlying structural pathology [7]. Pressure injury prevention guidelines emphasize the importance of repositioning and pressure redistribution to reduce pressure-related complications [8]. Sanobar et al. reported the occurrence of coccydynia among wheelchair users exposed to prolonged sitting, highlighting the possible effect of sustained pressure on the coccygeal region [9]. Similarly, Arif et al. documented coccygeal pain among postpartum women, indicating that coccygeal pain can occur in different clinical populations [10]. Although these populations differed from the present study, their findings provide context for understanding the possible role of mechanical loading in coccygeal pain.

Assessment using the NPRS [11] showed that moderate pain was the most commonly reported level of pain among participants with coccygeal pain. In addition, tenderness over the coccygeal region was frequently observed in patients who reported coccygeal pain. These findings suggest that patient-reported pain assessment, together with clinical examination, may facilitate the identification of coccygeal pain in prolonged bedridden patients. Coccydynia has a multifactorial etiology, and trauma, anatomical variations, and mechanical stress may contribute to its development [12,13]. Similarly, sacral chordoma may present with back pain, highlighting the importance of considering serious underlying pathologies during the clinical evaluation of patients presenting with spinal or coccygeal-region pain [14]. Maigne et al. investigated magnetic resonance imaging findings in patients with painful coccyx and described abnormalities involving the coccygeal discs and surrounding soft tissues [15]. Although imaging was not used to establish the diagnosis in the present study, this literature highlights the potential complexity of coccygeal pain and the importance of appropriate clinical assessment. Previous systematic reviews have examined conservative interventions and other treatment options for coccydynia [16,17]. These reviews describe a range of treatment approaches and variation in reported outcomes. Charrière et al. also investigated long-term outcomes among patients receiving conservative treatment for chronic coccydynia [18]. Although these studies provide background on the management of coccydynia, they do not directly establish the effectiveness of pressure-relieving interventions in bedridden patients. The findings of the present study highlight the importance of routine assessment of coccygeal pain in patients requiring prolonged bed rest. Early recognition, regular repositioning, appropriate pressure-relieving measures, and timely physiotherapy assessment may help address patient discomfort during hospitalization. However, the effectiveness of these interventions in preventing or reducing coccydynia among bedridden patients requires further investigation. Furthermore, sacral chordoma is a rare underlying pathology that may present with back or sacral pain, emphasizing the importance of considering alternative causes during clinical assessment [19].

Limitations

This study has certain limitations. The use of convenience sampling may limit the generalizability of the findings. The descriptive cross-sectional design does not allow causal relationships to be established between coccydynia and the assessed demographic or clinical factors. Furthermore, the study was conducted in a single tertiary care hospital, which may limit the applicability of the findings to other healthcare settings and populations. The study did not establish whether prolonged bed rest directly caused coccygeal pain. Additionally, the findings may be influenced by the limitations of the structured questionnaire and the possibility of misclassification of self-reported coccygeal pain. Further multicenter studies with larger sample sizes and analytical study designs are required to investigate factors associated with coccygeal pain among prolonged bedridden patients. Additionally, BMI, diabetes mellitus, and other relevant clinical factors were not specifically evaluated, which may have limited the assessment of factors associated with coccygeal pain. Lumbar pathologies were not specifically considered as exclusion criteria in the original study protocol. Therefore, the possibility of lumbar-related pain contributing to or confounding the reported coccygeal-region pain cannot be ruled out. Furthermore, since the presence of coccygeal pain was determined based on self-reported symptoms, uncertainty regarding pain localization and possible outcome misclassification cannot be completely ruled out. The investigator-developed questionnaire was not formally validated, and a standardized differential diagnostic assessment was not performed to distinguish coccygeal pain from referred pain originating from other anatomical regions. The exclusion of patients with communication difficulties may also have influenced the representativeness of the study population. Potential confounding factors, including history of previous pain, analgesic use, body habitus, and pressure-relieving practices, were not systematically assessed. Furthermore, the possibility of pain originating from the sacral skin, pressure-related injuries, or referred pain from adjacent anatomical structures cannot be ruled out, as the screening question did not establish the specific anatomical source of pain.

Conclusions

Coccydynia may be an important clinical concern among prolonged bedridden patients, particularly during periods of extended immobilization. Regular assessment of the coccygeal region, early recognition of pain and tenderness, appropriate repositioning, and use of pressure-relieving strategies should be incorporated into routine care for patients requiring prolonged bed rest. These measures, along with timely physiotherapy management, may help reduce discomfort, support patient mobility and participation in care, and improve overall comfort during prolonged hospitalization.

Appendices

Appendix 1: Self-structured questionnaire for assessment of coccydynia among prolonged bedridden patients

Demographic Data

Participant ID:- _____

Age:- _____

Gender:- _____

Date:- _____

Bed rest duration:- _____days (Must be ⩾10 days)

Section A: Bed Rest and Positioning (4 Options)

(Tick only ONE option for each question.)

1. Patient stays on bed most of the time.

☒ Yes ☒ No

2. Patient lies on the back for a long time.

☒ Yes ☒ No

3. Patient stays in the same position for more than 2 hours.

☒ Yes ☒ No

4. Patient's position is changed on time (every 2-4 hours).

☒ Yes ☒ No

5. Patient uses an air mattress.

☒ Yes ☒ No

6. Pillow/support is kept under the hip or buttock.

☒ Yes ☒ No

7. Patient sits daily for some time.

☒ Yes ☒ No

8. The bed feels hard for the patient.

☒ Agree ☒ Disagree

Section B: Coccyx Pain (YES/NO)

1. Do you feel pain in the tailbone (coccyx) area?

☒ Yes ☒ No

2. Did tailbone pain start after bed rest?

☒ Yes ☒ No

3. Does pain increase while turning in bed?

☒ Yes ☒ No

4. Does pain increase while lying on back?

☒ Yes ☒ No

5. Does pain increase during nursing care/cleaning?

☒ Yes ☒ No

6. Does pain reduce after changing position?

☒ Yes ☒ No

Section C: Pain Severity

1. NPRS question: On a scale of 0 to 10, how much tailbone pain do you have right now?

(0 = No pain, 10 = Worst pain)

☒ 0 ☒ 1 ☒ 2 ☒ 3 ☒ 4 ☒ 5 ☒ 6 ☒ 7 ☒ 8 ☒ 9 ☒ 10

NPRS pain score (0-10): __ /10

Section D: Local Signs (YES/NO)

1. Pain on touch over coccyx area (tenderness)?

☒ Yes ☒ No

2. Redness near tailbone area?

☒ Yes ☒ No

3. Swelling/warmth near the tailbone area?

☒ Yes ☒ No

4. Any bed sore near the coccyx/sacrum area?

☒ Yes ☒ No

5. Any numbness/tingling near the buttock area?

☒ Yes ☒ No

6. Any history of fall/trauma before bed rest?

☒ Yes ☒ No

Section E: Impact Statements (AGREE/DISAGREE)

1. Tailbone pain reduces comfort while lying.

☒ Agree ☒ Disagree

2. Tailbone pain disturbs sleep.

☒ Agree ☒ Disagree

3. Tailbone pain makes position changes difficult.

☒ Agree ☒ Disagree

4. Tailbone pain affects physiotherapy or movement.

☒ Agree ☒ Disagree

5. Tailbone pain increases stress or irritation.

☒ Agree ☒ Disagree

Interpretation (For Prevalence)

To find out the prevalence, there are a total of 25 questions, which are divided into four categories:

• Bed rest and position questions

• Pain questions

• Sign questions

• Impact questions

Pain severity was also measured by NPRS. Each question has Yes/No and Agree/Disagree options.

For scoring,

• Yes/Agree = 1,

• No/Disagree = 0.

According to that,

Bed Rest and Position Questions

• There are eight questions in total.

• Total bed rest score = 0-8

Pain Questions

• There are six questions in total.

• Total pain score = 0-6

Sign Questions

• There are six questions in total.

• Total sign score = 0-6

Impact Questions

• There are five questions in total.

• Total impact score = 0-5

Pain Severity by NPRS

On the basis of the scale, the result must be mild, moderate, or severe.

NPRS Severity

• 0: No pain

• 1-3: Mild

• 4-6: Moderate

• 7-10: Severe

Prevalence Calculation (Most Important)

For prevalence, the main question is:

1. Tailbone pain present? (Yes/No)

• Yes = Self-reported coccygeal-region pain present

• No = Self-reported coccygeal-region pain absent

Formula

$$\text{Prevalence } (\%) = \frac{\text{Number of patients with coccydynia}}{\text{Total number of participants}} \times 100$$

Additional Information

Author Contributions

All authors have reviewed the final version to be published and agreed to be accountable for all aspects of the work.

Concept and design: Apurva M. Pawar, Dhairysheel Patil

Acquisition, analysis, or interpretation of data: Apurva M. Pawar, Dhairysheel Patil

Drafting of the manuscript: Apurva M. Pawar, Dhairysheel Patil

Critical review of the manuscript for important intellectual content: Apurva M. Pawar, Dhairysheel Patil

Supervision: Apurva M. Pawar, Dhairysheel Patil

Disclosures

Human subjects: Informed consent for treatment and open access publication was obtained or waived by all participants in this study. Krishna Vishwa Vidyapeeth Institutional Ethics Committee issued approval (approval no.: 484/2025-2026; approval date: February 27, 2026). **Animal subjects:** All authors have confirmed that this study did not involve animal subjects or tissue. **Conflicts of interest:** In compliance with the ICMJE uniform disclosure form, all authors declare the following: **Payment/services info:** All authors have declared that no financial support was received from any organization for the submitted work. **Financial relationships:** All authors have declared that they have no financial relationships at present or within the previous three years with any organizations that might have an interest in the submitted work. **Other relationships:** All authors have declared that there are no other relationships or activities that could appear to have influenced the submitted work.

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