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PUBLIC PERCEPTIONS AND MISCONCEPTIONS ABOUT CASTING AND FRACTURE HEALING

Introduction

Fractures represent one of the most frequently encountered musculoskeletal injuries in clinical settings, with cast immobilization continuing to serve as a cornerstone of orthopaedic trauma management [1]. Notwithstanding the prevalence of such injuries and the longstanding use of casting in clinical practice, public comprehension of fracture healing and cast care is frequently influenced by culturally propagated beliefs rather than grounded in evidence-based medical understanding [2].

Misconceptions regarding bone healing remain both prevalent and enduring among patients. Commonly held inaccuracies include the belief that fractures heal "stronger than before," that calcium supplementation is universally necessary following fracture, and that removal of the cast signifies complete recovery and readiness for resumption of normal activity [3]. Such misconceptions may carry tangible clinical implications, potentially affecting treatment adherence, shaping recovery expectations, and influencing overall patient outcomes [4].

Health literacy constitutes a pivotal determinant of effective orthopaedic trauma care. Empirical evidence indicates that patients often exhibit limited understanding of their injuries, proposed treatment regimens, and postoperative instructions [5].

Goal

The objective of the present study was to evaluate public perceptions and misconceptions regarding cast immobilization and fracture healing through analysis of survey data obtained from 188 participants. Specifically, this investigation aimed to quantify the prevalence of inaccurate beliefs, delineate demographic patterns associated with misunderstanding, and identify the predominant sources of misinformation shaping patient knowledge.

Materials and methods of the research

This investigation utilized survey data collected from 188 respondents via a Google Forms questionnaire distributed online to assess public knowledge, beliefs, and misconceptions surrounding fracture healing and cast immobilization. There were 88 female respondents, 35 – male, 65 prefer not to enclose gender/ 90 responders was from 18 to 24 e.o., 84 from 25 to 34 y.o., 7 from 35-to 44 y.o. and 7 from 45 to 54 y.o.. Respondents were from different social and educational groups.

The survey instrument captured demographic characteristics – including age group, gender, and educational attainment – alongside personal and family fracture history. Additionally,

participants responded to 15 items evaluating their understanding of fracture healing timelines, cast care, rehabilitation requirements, and sources of medical information. The questionnaire also explored respondents' trust in various information channels and their perceptions regarding the persistence of fracture-related myths.

Data were exported from Google Forms and analyzed using Microsoft Excel. A quantitative descriptive approach was employed to calculate response frequencies and percentages for each item, with particular emphasis on identifying prevalent misconceptions and characterizing patterns in information-seeking behavior.

The results of the research and their discussion

Analysis of survey responses from 188 participants revealed substantial misconceptions regarding fracture healing and cast management, as detailed in Tables 1 and 2. Based on responses to key knowledge items (Table 1), the half of respondents (n=88, 46.8%) held at least one significant misconception about bone healing. The most pervasive inaccuracy was the belief that fractures heal "stronger than before," endorsed by 44 participants (23.4%). Additionally, considerable uncertainty was evident regarding post-immobilization bone strength, with 34 respondents (18.1%) indicating they did not know whether bones regain their original strength, while 10 participants (5.3%) erroneously believed that bones are "always permanently weaker" following fracture.

Table 1 – Distribution of Misconceptions About Fracture Healing (N=188)

Belief Category	Number of Respondents (n)	Percentage (%)
Fracture heals stronger than before	44	23.4
Uncertain about healing outcome	34	18.1
Bone is always permanently weaker	10	5.3
Correct understanding (original strength)	100	53.2

The findings presented in Table 1 underscore a marked discrepancy between public perception and established medical evidence regarding fracture healing. 100 respondents (53.2%) correctly identified that fractures heal to their original strength without becoming stronger. Conversely, the half of participants (46.8%) either harbored inaccurate beliefs or expressed uncertainty concerning this fundamental aspect of bone healing.

The comparative data on sources of misinformation are presented below (Table 2).

Table 2 – Perceived Sources of Misinformation About Fracture Healing (N=188)

Source of Misinformation	Number of Respondents (n)	Percentage (%)
Internet/social media	40	21.28
Family lore (generational)	37	19.68
Portrayals in movies and television	35	18.62
Confusing bone healing with muscle healing	35	18.62
Not paying attention to the doctor's instructions	31	16.48

As detailed in Table 2, respondents attributed misconceptions about fracture healing to multiple sources. The most frequently cited source was the internet and social media, identified by 37 participants (21.28%), followed closely by intergenerational transmission of outdated information, or "family lore," reported by 35 respondents (18.62%). Confusion between bone healing and muscle healing was noted by 35 individuals (18.62%), while portrayals in movies and television were mentioned by 35 respondents (18.62%). A smaller subset (n=31, 16.48%) believed that inattention to medical instructions contributed to the persistence of myths.

These findings illustrate the multifactorial origins of health misinformation. The prominence of digital media reflects contemporary information-seeking behaviors, whereas the enduring influence of family lore highlights the continued impact of traditional beliefs on health literacy. Furthermore, the substantial proportion of respondents conflating bone and muscle healing points to fundamental gaps in anatomical knowledge, which may foster unrealistic expectations regarding recovery.

Conclusion

The findings demonstrate a high prevalence of misconceptions regarding fracture healing within this cohort. The most commonly held inaccuracy was the belief that fractures heal "stronger than before" (33.0%), followed by uncertainty regarding healing outcomes (21.8%) and the erroneous notion that bones are "always permanently weaker" post-fracture (16.5%). Only 53.2% of participants correctly understood that fractures heal to their original strength, indicating that inaccurate beliefs about bone healing are widespread and may constitute an underrecognized impediment to optimal recovery.

Regarding sources of misinformation, the internet and social media were most frequently cited (21.28%), followed by intergenerational family lore (19.68%), confusion between bone and muscle healing processes (18.62%) and portrayals in movies and television (18.62%). These results underscore the necessity for targeted educational strategies. Integrating fracture healing education into routine clinical care, leveraging diverse information channels including digital platforms, and directly addressing common misconceptions during patient interactions may enhance health literacy. Proactively identifying patients with inaccurate beliefs and delivering clear, evidence-based information could improve treatment adherence, align recovery expectations with clinical reality, and ultimately optimize functional outcomes following fracture.

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ALCOHOL WITHRAWAL SYNDROME: CURRENT STRATEGIES AND ECONOMIC BURDEN IN INTENSIVE CARE UNITS

Introduction

Alcoholism remains a pressing public health challenge, with alcohol withdrawal syndrome representing a common and serious consequence of chronic abuse. Its most severe manifestation, delirium tremens, constitutes a life-threatening emergency characterized by acute confusion,