

# Hand Therapy Led Follow-up for Paediatric Hand Injuries

Agata Plonczak, Gordon McArthur and Maxim Horwitz

Department of Hand Surgery, Chelsea and Westminster Hospital, UK

## Introduction

- The hand is the most commonly injured part of the body in the paediatric age group (Vadivelu R et al 2006).
- The goal of treatment is to quickly have children return to their daily leisure and academic activities.
- Most hand injuries in children can be managed non-operatively and are associated with excellent outcomes (Young K et al 2013).
- Early regular supervised hand therapy is essential to expedite recovery and prevent long-term stiffness (Yeh PC and Dodds SD 2009).
- Whilst the majority of our patients are discharged to the care of hand therapists there is no literature to support this protocol. Our aim was to ensure this is safe and effective practice.

## Material & Methods

- We conducted a retrospective analysis of all patients referred to our weekly paediatric hand trauma clinic for closed injuries over a four month period between December 2014-March 2015.
- Data related to demographics, injury pattern and clinical outcomes was recorded and analysed.
- A telephone interview with a patient satisfaction questionnaire was attempted with all patients discharged to the care of hand therapists.

## Results -demographics

- 139 patients were seen in the study period, including 90 males and 49 females. The average age was 13, range 2-17 (Figure 1).

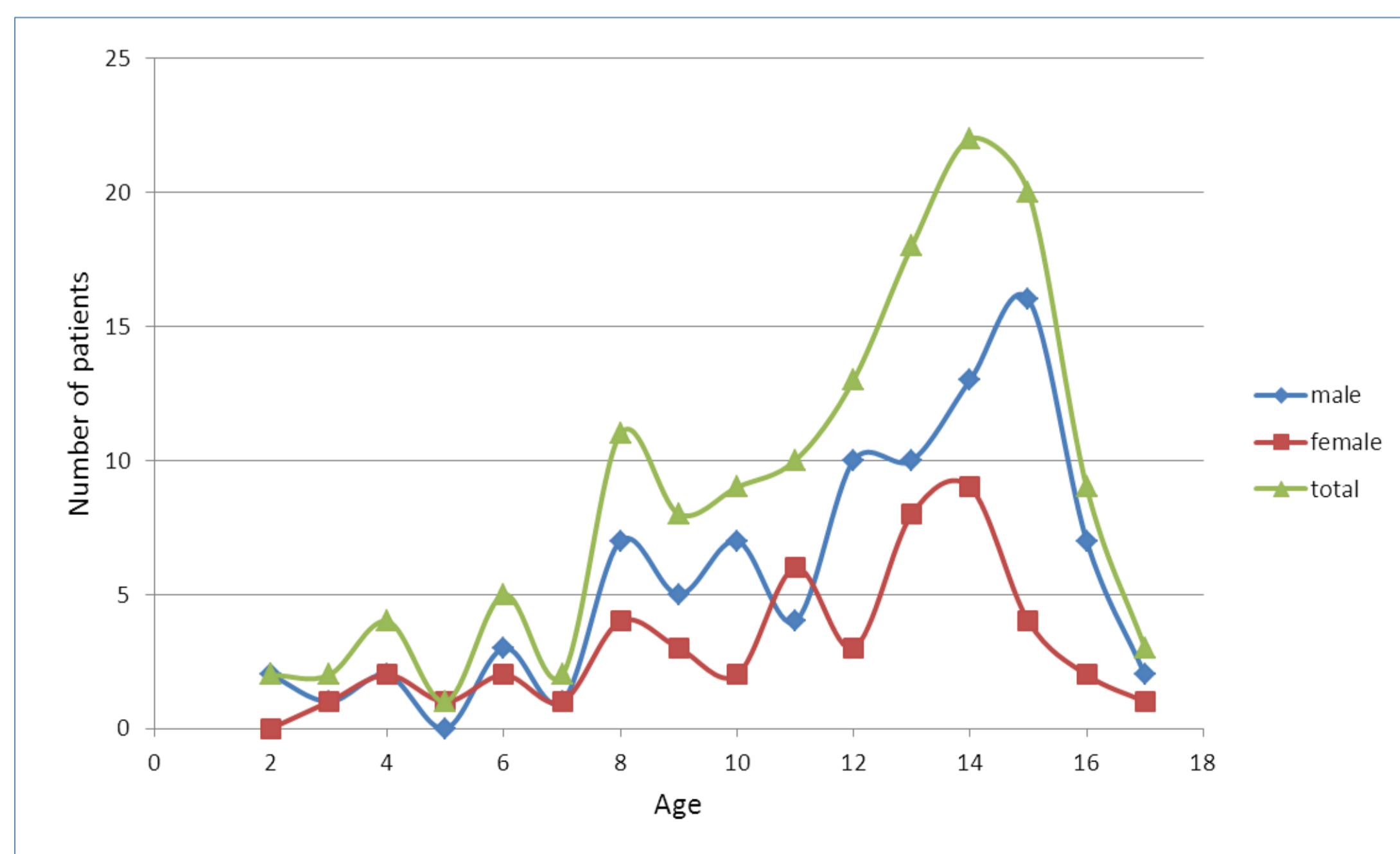


Figure 1: Number of patients according to age

## Results –injury pattern

- Phalangeal fractures (39%), volar plate injuries (19%) and metacarpal fractures (16%) were the commonest causes of hand trauma.
- 54% of injuries occurred on the right and 46% on the left.
- The most commonly injured fingers were the border rays ie little finger in 43%, followed by the thumb in 20%.

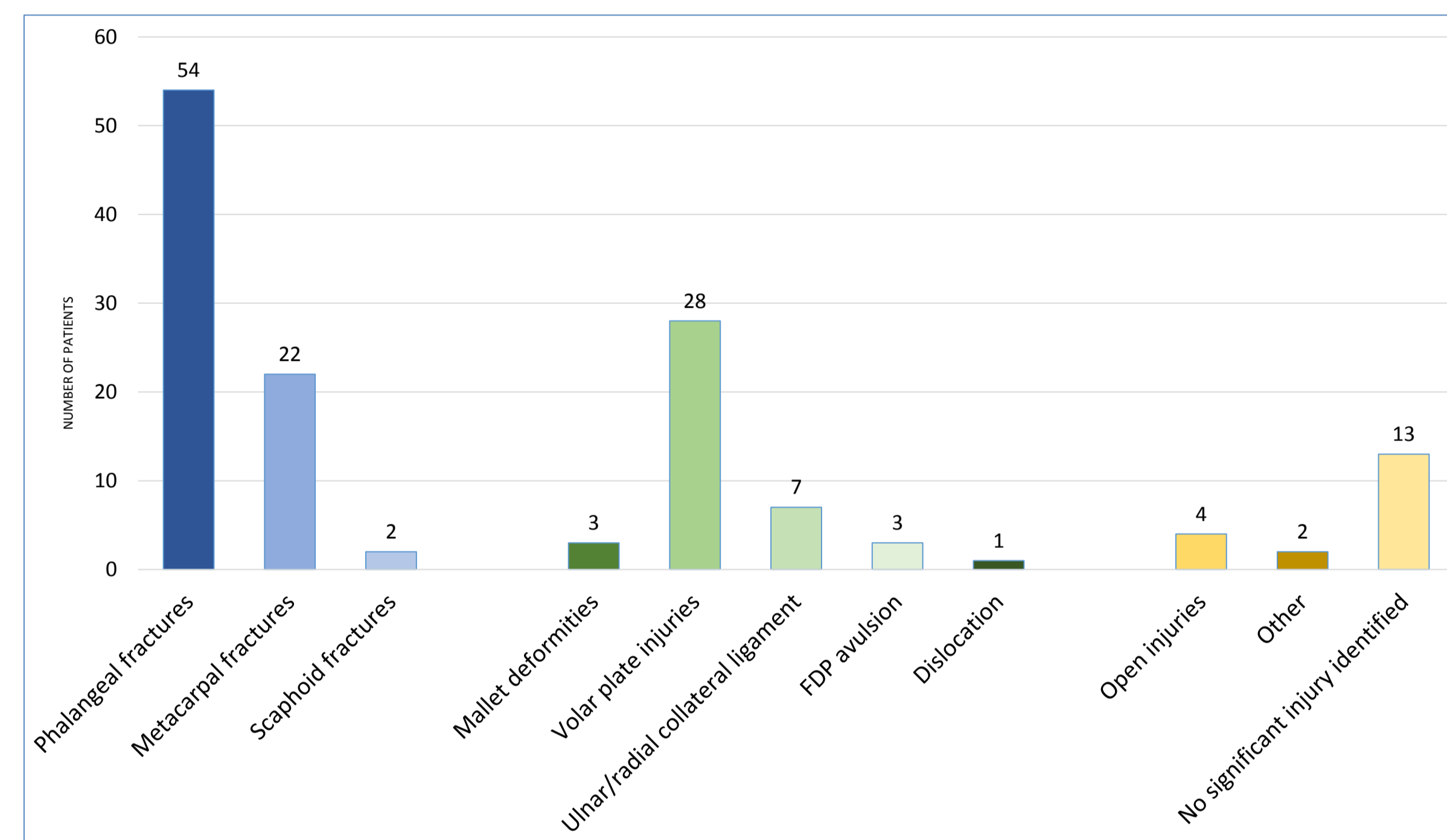


Figure 2: Injury pattern

## Results –management

- The majority of patients (88%) were managed non-operatively.
- 16 out of 139 patients underwent surgery including 11 out of 78 patients with bony injuries and 4 out of 42 patients with closed soft tissue injuries.



Figure 3a: Salter Harris (SH) II fracture of left little finger proximal phalanx



Figure 3b: Closer reduction of a SH II fracture of left little finger proximal phalanx

## Results –follow up

- 98 patients (71%) were discharged to hand therapy follow-up at some point along their treatment, which included 71 patients (51%) at the first visit and 27 patients (19%) at subsequent visits.
- 81% of patients with soft tissue injuries and 46% of patients with bony injuries were discharged to the care of hand therapists (HT) at the first appointment.
- 51 out of 98 (52%) patients discharged to hand therapy follow-up completed a patient satisfaction questionnaire.
- 100% of the parents were happy with the care and 96% denied any complications.
- 100% of the parents felt the therapists knew enough about their care and 96% were not disappointed they did not see a doctor.
- Although at least 35% of patients were seen by different therapists, it did not make a difference on the outcome.

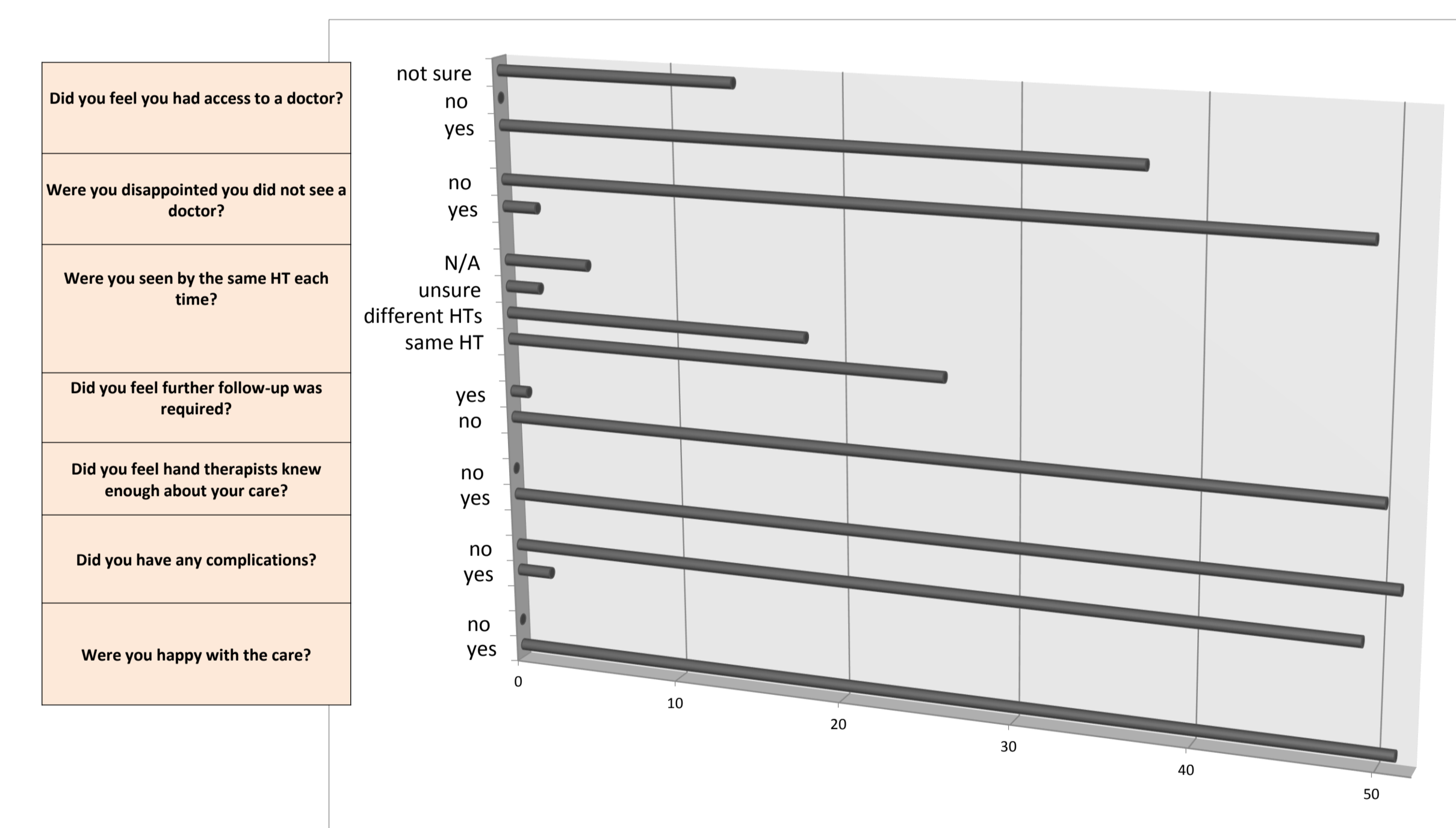


Figure 4: Results of patient satisfaction questionnaire

## Conclusion

- Hand therapy led follow-up is appropriate for a selected group of paediatric hand injuries.
- It is safe and associated with high patient satisfaction.

## Key references

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- Valencia J, Leyva F, Gomez-Bajo GJ. Pediatric hand trauma. Clin Orthop Relat Res 2005;77– 86.
- Yeh PC, Dodds SD Techniques in Orthopaedics 2009; 24: 150-162
- Young K, Greenwood A, MacQuillan A, Lee S, Wilson S. Paediatric hand fractures. J Hand Surg Eur. 2013, 38: 898-90