

Introducing a New Nursing Intervention Developed for Self-Injury Behaviour in Children with Intellectual Disabilities

Zihinsel Engelli Çocuklarda Kendine Zarar Verme Riskine Karşı Geliştirilen Yeni Bir Hemşirelik Girişimi

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ABSTRACT The purpose of this case report is to illustrate the successful use of an alternative, medication-free nursing interventions for a child diagnosed with Intellectual disabilities (ID) who manifests self-injurious behaviour (SIB) by biting his right hand; a new type of palmar bandage featuring an attached stress ball. The hand bandages as a new nursing intervention were provided, one for the child and the other for the nurse. New tissue damage was no observed in the right hand scar tissue area on the 15th day after the child started using the bandage. The intervention was satisfactory and hastened recovery, and was not restrict the hand movement and easy to perform.

Keywords: Bandage; intellectual disability; child; pediatric nursing; self-injury behaviour

ÖZET Bu olgu sunumunun amacı, kendine zarar verme hemşirelik tanısı ile sağ elini ısırmasıyla kendine zarar verme davranışı gösteren ve entelektüel yetersizlik (ID) tanısı konan bir çocuğa alternatif, ilaçsız hemşirelik müdahalelerinin başarılı bir şekilde kullanılmasını göstermektir. Bu ürün içerisine stres topu geçirilmiş eli koruyan yeni bir bandaj türüdür. Yeni bir hemşirelik müdahalesi olarak el bandajları, biri çocuk için, diğeri hemşire için tasarlanmıştır. Çocuk bandajı kullanmaya başladıktan sonraki 15. günde sağ el skar dokusu bölgesinde yeni doku hasarı tespit edilmemiştir. Bu hemşirelik girişimi başarılı ve iyileşmeyi sağlayan bir ürün içermekte ve el hareketini kısıtlamadan, elin hareketine olanak sağlamaktadır.

Anahtar Kelimeler: Sargı; entelektüel yetersizlik; çocuk; çocuk hemşireliği; kendine zarar verme

Intellectual disabilities (ID) are characterized by violent outbursts of anger and stereotypical or self-injurious behaviour (SIB).^{1,2} ID affects approximately 1% of the population and sufferers are at increased risk for SIB which is one of the most striking and devastating conditions associated with ID, and tends to affect children over 3.²⁻⁴ The prevalence of SIB is growing and is highest in young children referred to neurodevelopmental paediatric clinics.^{5,6} The most commonly used definition of SIB are acts directed toward oneself that are likely to result in tissue damage. There are varying types of SIB. The most common forms associated with ID are self-biting, head-hitting, head-banging, and excessive self-rubbing and self-scratching.^{1,3,4,7} The purpose of this case report is to illustrate the successful use of an alternative, medication-free nursing interventions for a child diagnosed with ID who manifests SIB by biting his right hand; a new type of palmar bandage featuring an attached stress ball.

CASE REPORT

The patient is a 12-year-old with ID. He has communication difficulties in his class, inadequate fine motor skills, and carried out SIB by biting his right hand when exposed to stress. Specifically, the scar tissue area showed deteriorated tissue integrity on the right hand, which consisted of an area of scar tissue approximately 4x5 centimetres in size. It was determined that the child had used previously used hand bandages but had ceased to do so. Thus, a new hand bandage was developed by examining both the reasons for its use the reasons that it was avoided.

MATERIAL AND METHODS

There are many varieties of hand bandages on the market which are useful for treating acute injuries for limited periods of treatment. However, these limitations are enhanced in such bandages' use with SIB patients with ID due to difficulties in daily application. Thus, this difficulty is overcome by our new design of hand bandages designed especially for SIB patients which are not only designed to protect only the potential damage area which is fun, they are also suitable for daily use in children (unlike traditional bandage designs), and do not restrict hand movement (Figure 1). This new product is made from filaments that pass across the skin of the palmar surface. In order to treat this region of tissue damage, this pocket, which is overlaid on a pocked hand, is placed halfway across attached to

a smiley-faced stress ball. This product has been registered as a national industrial design with the Turkish Patent and Trademark Office (2015-OE-580010). This product has been developed by the nursing profession by the researcher.

The teacher and the family were informed about the continuation of the process. He used hand bandage under the supervision of teacher and nurse at school. The family reported that the child continued to use the hand bandages daily except nights.

PROCEDURES

Implementation of the new bandage was carried out from January-April 2014 at an Special Education School for children with ID. The Provincial National Education Institution granted permission to carry out this study and adhered to the Helsinki principles. Ethics committee approval dated/numbered 2014/21 was obtained in Hatay. All steps of the research were agreed beforehand with the teachers, parents and nurses involved. First, 2 bandages were provided, one for the child and the other for the nurse. At each stressful moment when the child was biting their own hand, the nurse, wearing a new bandage, raised the same hand to their mouth, biting on the bandage, while the child was biting his hand. On the first introduction of the new bandage to the child, while the nurse presented themselves wearing a bandage, the child refused to wear one. However, on the second trial, after having seen the nurse biting their bandage,

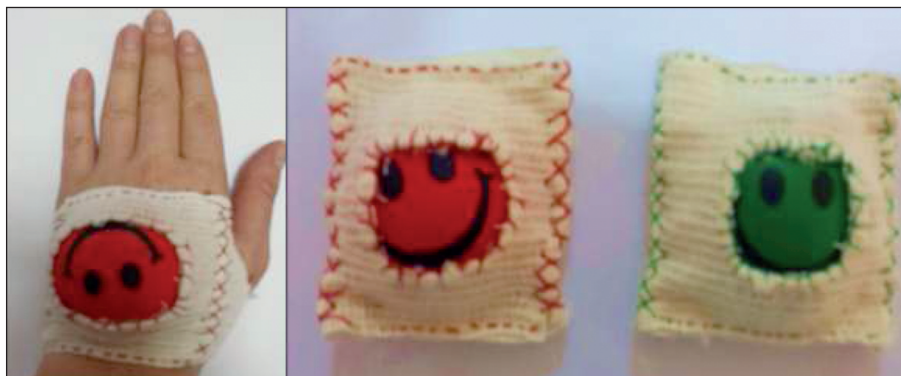


FIGURE 1: The new type of palmar bandage*

*This product has been registered as a national industrial design with the Turkish Patent and Trademark Office (2015-OE-580010).

the child then expressed a desire to also wear one of the new bandages.

RESULTS

At completion of the intervention, this led to the child biting the bandage during SIB rather than his own hand. After 4 week period, when the child had got used to wearing their bandage, the nurse removed their own. Next, continued use of the bandage on subsequent occasions by the child was monitored.

One month after the intervention, the family reported that the child continued to use the hand bandages. Overall, new tissue damage was not observed on the child's right palmar region on the 15th day after the child had started using the bandage.

DISCUSSION

SIB can be very distressing for parents/caregivers and can cause significant long-term physical damage in addition to short-term injury and pain, and can have a negative impact on interpersonal relationships and quality of life.^{2,8} Sender and Nazar (2017) study⁹ described a case report for the functional improvement of an SIB sufferer's right hand.⁹ In this case, according to the surgical opinion, further delay in presentation to psychiatric services could have led to far more serious damage to the patient's finger culminating in possible amputation. Generally, the prevalence of challenging behaviour increases with age until early adulthood, and it once manifests, SIB is likely to continue over the patient's lifespan, is resistant to treatment, and costly to treat.^{2,8} Our case study developed a new, low-cost nursing intervention suitable for daily use in treating children with SIB.

The research suggests that much more work is needed to understand the processes and pathways underlying the early development of SIB in children with intellectual and developmental delays, as well as early interventions for young children who engage in challenging behaviour such as SIB.^{2,8} It is crucial that paediatric nurse practitioners who provide care for children suffering from ID possess a thor-

ough understanding of SIB. If an underlying cause has been identified, nurses can devise strategies for changing the patient's environment in order to address the identified need(s).⁷ In this study, nurses and the child worked together with the nurse encouraging the child to use the new design of hand bandage.

Preventing SIB is difficult, but with patience, accurate assessment, and problem-solving skills, nurses can find ways to modify a patient's behaviour and reduce dependence on medication.⁴ Paediatric nursing is a field that has encompasses the protection, safety, and well-being of children. Paediatric nurses treating children with ID are tasked with reducing the incidence of the disease. And, in order to do this, it is essential that nurses play a central role in persuading the children and their families of the need for this new medical intervention as well as nurse's active role both during and after the introduction of the new bandage.¹⁰ A diagnosis of ID may be lead to an increased risk for potentially developing SIB, which may, in turn, lead to severe or even life-threatening medical and surgical complications.¹¹ In sum, in treating this child's SIB, this new intervention can be said to be successful in this case in conjunction with a holistic primary nursing approach involving nurses, teachers and parents. This finding highlights the need for new initiatives that enable nurses to provide on-site diagnosis and care in school health nursing contexts, not just with hospitals, but also in health promotion programmes and early interventions.

In conclusion, the new hand bandage intervention performed well, and did not restrict hand movement and was easy to apply. For future research, it would be beneficial if a larger sample size in order to better develop the design and usability of this innovative nursing intervention.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or

members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

This study is entirely author's own work and no other author contribution.

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