



## Nursing care in spinal cord injuries in Turkey

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The organized management of spinal cord injury is a team activity and the nurse is at the central position of that team. Nursing activities and caring should be superior in a spinal cord injury rehabilitation department. Nevertheless, nurses seldom undertake caring activities and usually perform therapeutic activities in developing countries. We recorded the care of 15 spinal cord injured patients around the clock for 10 working days. We asked the nurses, patients and their family carers to record every activity they performed on the forms. The activities were as follows: Oral care, face care, hand care, foot care, nail care, genitalia care, perineal care, catheterization, head bath, bed bath, bath, positioning, mobilization, exercising, wound dressing, room activities and the other nursing activities. The total number of nursing activities, performed was 3573. Subtotals were as follows: 2545 caring activities, 364 room activities, and 664 other nursing activities. While nurses performed 550 of the caring activities, patients and their family carers performed 988 and 1007 patient care activities. The distribution of the nurses' activities was as follows: 40% for caring, 11% for room activities, 48% for others. We discuss the importance of caring activities and the role of nurses in the rehabilitation team.

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### Introduction

Virginia Henderson stated that 'The unique function of the nurse is to assist the individual, sick or well, in the performance of those activities contributing to health or its recovery that he would perform unaided if he had the necessary strength, will or knowledge and to do this in such a way to help him regain independence as soon as possible'.<sup>1</sup> Caring, coordination, and therapy are the core elements of nursing practice. The nurse must care for the patient and teach self-care and guide family members in giving care. Nursing includes managing situations that are changing rapidly.<sup>2</sup> The nurse is not an assistant health worker, but the main one. The organized management of spinal cord injuries is a team activity, and the nurse is at the central position of that team.<sup>3</sup> Therefore rehabilitation of spinal cord injuries is an ideal model of nursing care. In developing countries, nurses seldom undertake caring activities and usually perform therapeutic activities such as drawing blood samples, and checking vital signs. Hence one of the family members takes care of the patient full time in the hospital. Platin and Dogan addressed this problem in their studies.<sup>4,5</sup> Platin reported that nurses spent 0.1% of their work hours on caring activities in a public hospital in Turkey. The distribution of nurses' activities was 33% for diagnostic utilities, 36% for

therapeutic activities, 14% for medical recordings, 61% for the other assistive activities, 12% for resting subsequently.<sup>4</sup>

Dogan studied the caring activities at the physical medicine and rehabilitation (PM&R), orthopaedics and neurosurgery departments in our hospital in the daytime. The distribution of caring activities in the PM&R department were as follows: Nurses 14.1% (181 activities), students of nursing college 9.4% (120 activities), physiotherapists 8.2% (105 activities), family carers 47.3% (605 activities), patients 21% (269 activities).

Dogan's study showed that nursing care in our department was not as good as it should be in a rehabilitation unit.<sup>5</sup> As a result, we initiated an inservice training program for nurses.

We planned this study to see the results of the training program. We questioned our nursing care system.

### Materials and methods

We took 15 spinal cord injured patients under observation around the clock for 10 working-days. First we designed a form for nursing activities including oral care, face care, hair care, hand care, foot care, perineal care, bath, correct positioning, mobilization, exercises, wound dressing, bed and room care, therapeutic activities, and other nursing activities. We asked the nurses, patients and their family carers to

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record every activity they performed for 24 h on the forms. The demographic features of the patients are presented in Table 1.

The descriptions of the nursing activities are as follows:

- Oral care: The process of cleaning and freshening the teeth, gums and mouth.
- Face care: The process of cleaning and washing of the face including eye, ear, and nose.
- Hair care: The process of brushing and combing of the hair to enhance attractiveness and self-esteem.
- Hand care: The process of hand washing and cleaning hands to remove micro and macro pathogenic organisms from the skin.
- Foot care: Preventive measures taken to avoid deformities, infections of the feet. Cleansing of the feet.
- Nail care: Trimming of the nails.
- Genitalia care: Cleansing of the meatus and penis before catheterization. If an indwelling catheter is present, keeping it clean.
- Perineal care: Cleansing of feces, and keeping the perineal area clean to prevent contamination.
- Catheterization: Inserting the indwelling or intermittent catheter.
- Head bath: To shampoo the hair at the bed side.
- Bed bath: The entire body of the patient is washed at the bedside.
- Bath: The patient takes a complete bath at the bath room with soap.
- Positioning: Turning, moving or lifting the patient in bed and wheelchair to prevent pressure sores, and contractures.
- Mobilization: The act of walking, with or without assistance, transferring to wheelchair.

**Table 1** The demographic characteristics of the patients

<i>Education</i>	<i>n</i>	<i>Level</i>	<i>n</i>
Primary	9	Paraplegia	13
High school	5	Tetraplegia	2
University	1		
<i>Age</i>		<i>Sex</i>	
(Mean ± SD)	21 ± 4	Male	14
Range	20–28	Female	1

**Table 2** Total number of results and their percentages during day time. (Other activities include diagnostic, therapeutic, charting activities etc.)

<i>n</i>	<i>Nurse</i>	<i>%</i>	<i>Carer</i>	<i>%</i>	<i>Patient</i>	<i>%</i>	<i>Total</i>	<i>%</i>
Caring activities	550	21.6	1007	39.5	988	38.8	2545	71.2
Room activities	158	43.4	173	47.5	33	9	364	10.1
Other activities	664	100					664	18.5
Total	1372	38.4	1180	33	1021	28.5	3573	100

- Exercising: To make the patient exercise to increase muscle power in nonparalyzed limbs and to maintain full range of motion in paralyzed limbs.
- Wound dressing: The dressing of pressure sores.
- Room activities: The process of changing bed linens, and flattening sheets. Getting patients undershirts on and off.
- Other nursing activities: Therapeutic, charting and diagnostic utilities etc.<sup>6</sup>

## Results

The total number of nursing activities was 3573 for the 10-day period between 08.00 and 17.00 h. Of these 2545 were care activities, and 364 of them were room activities. The nurses themselves performed 1372 (38.4%) of these activities. Forty per cent of the nurses' activities (550 activities) were caring activities, 12% (158) were for room activities, and 48% (664 activities) were diagnostic, and therapeutic etc. Two hundred and twenty-five out of 550 caring activities (40.9%) performed by the nurses were positioning the patients.

We also looked at the nursing activities performed during the the night shift between 17.00 and 08.00 h. The nurses performed 347 activities at night. While 236 of them (68%) were for other nursing activities, 101 of them (29%) were caring activities.

## Discussion

Nursing activities and caring should be superior in a spinal cord injury rehabilitation department. In order to teach care to the family and the patient, nurses should have enhanced knowledge and skills about spinal cord injury and prevention of complications. They should be more independent and autonomous in fields such as bladder rehabilitation and pressure sore care.<sup>7</sup> G Bedbrook made the following statement: 'Nurses have played and must play a dominant role in both acute and lifetime services'.<sup>8</sup> As a rehabilitation unit in a physical medicine and rehabilitation department, we are very well aware of the importance of nursing care in spinal cord injuries. The previous study by Dogan<sup>5</sup> highlighted that the number of nurses was very low. We increased the number of nurses. We have begun a continuous training program in the ward. Every nurse now has the responsibility of four patients in one room. The nurses discuss the patients' situation

**Table 3** The distribution and the numbers of caring activities among the nurses, carers, and patients themselves in daytime

	n	Nurse	%	Carer	%	Patient	%	Total
Oral care		34	20.2	46	27.4	88	52.4	168
Face care		22	10.4	73	34.6	116	55.0	211
Hair care		10	12.7	24	30.4	45	57.0	79
Hand care		44	17.5	38	15.1	169	67.3	251
Foot care		25	40.3	9	14.5	28	45.2	62
Nail care		13	25.5	20	39.2	18	35.3	51
Genitalia care		45	26.3	50	29.2	76	44.4	171
Perineal care		14	19.2	48	65.8	11	15.1	73
Catherization		41	14.3	65	22.6	181	63.1	287
Emptying urine bag		7	8.2	77	90.6	1	1.2	85
Head bath		6	37.5	6	37.5	4	25	16.0
Bed bath		4	28.6	6	42.9	4	28.6	14.0
Bath		5	10.4	25	52.1	18	37.5	48.0
Positioning		225	40.9	222	40.4	103	18.7	550
Mobilization		21	7.7	164	60.5	86	31.7	271
Exercising		0	0	134	77	40	23	174
Dressing		34	100					34
Total		550	21	1007	39	988	39	2545

**Table 4** The distribution of caring activities performed at night

Caring activities	Nurse (n)	Carer (n)	Patient (n)	Total (n)
Oral care	0	1	14	15
Face care	0	2	9	11
Hair care	0	0	0	0
Hand care	0	8	49	57
Foot care	0	2	0	2
Nail care	0	0	0	0
Genital care	5	5	16	26
Perineal care	0	5	0	5
Catheterization	5	28	80	113
Emptying urine bag	0	12	0	12
Head bath	0	0	0	0
Bed bath	0	0	0	0
Bath	0	0	0	0
Positioning	88	69	31	188
Mobilization	0	40	9	49
Exercising		20	2	22
Dressing	3	0		3

with the consultant doctor on the daily ward rounds. The rehabilitation team has begun to meet once every week. The other members of the team are learning to accept the nurses' knowledge and experience, and that they need to coordinate with nurses.

The total number of all nursing interventions increased from 1654–3573 following the inservice training. The total number of caring activities increased from 1280–2545 compared to Dogan's study.<sup>5</sup>

The distribution of caring activities among nurses, family carers and patients changed significantly after the nurse training program. The family carers' caring activities increased slightly in number (from 605–

1007), but decreased in ratio (47 : 39%). The patients' own caring activities increased from 269–988. So following training, the patients' self-caring ratio increased enormously from 21% to 39%. We used to teach all activities to the family carers as a first step. Later we realized that if one of the family members began to do caring activities, it would be almost impossible to make the patients independent. That is why we ignore the family carers in some activities such as catheterization, perineal hygiene, grooming, transfer activities, and give emphasis on patient training only. Families usually are very protective. They have pity on their children, and think that they have to help and do all the caring activities. This would inversely affect the rehabilitation process.

Even simple activities such as face washing and hand washing had (50% and 41%, respectively) been mostly performed by family carers prior to the training program. Following in-service training, nurses realized the importance of their roles as trainers in care-giving besides giving care alone. They spent much more time on patient education and training. They taught the patients and the family carers the importance of self-caring and functional independence.

Prior to this study, nurses used to teach family members to catheterize the patient as a first step, and most of the patients never attempted to catheterize themselves. Following in-service training of the nurses as trainers and the patients' training by the nurses, the self-catheterization rate reached 63%.

Nail care is very important in primary and long-term spinal cord injured patient care. The nurses did not previously give any nail care. One of the nurses took a 1 month course in a beauty shop for manicure and pedicure. Then she taught nail care to the other nurses. Now the nurses give nail care and teach it to the patients. The training program has failed in

**Table 5** Total number of activities performed at night

n	Nurse	%	Carer	%	Patient	%	Total	%
Caring activities	101	20	192	38	210	41	503	66
Room activities	10	50	10	50	0		20	2
Other nursing activities	236	100	0		0		236	31
Total	347	45.7	202	26.6	210	27.6	759	100

perineal hygiene, bathing and in changing the urine bags. Family carers continue to do these activities.

We have also recorded the nursing activities between 17.00 and 08.00 h in our study. The total number of caring activities recorded in the evening was very low (2545 activities in the day time, and 503 activities in the evenings).

We plan to increase the number of the nurses in the day and night shifts and employ some nursing aids for some activities. Therefore, we may not need the family members as care givers in the hospital.

Of course, many points of this study can be criticized. The patients and their carers may not have recorded all of their caring activities. It may be very hard for nurses to record every activity during times of too much work. Evaluating the activities in numbers is another problem. Caring activities for a newly admitted patient and a stable patient are not the same, and quality is more important than quantity. We wanted to address the problem of caring activities in developing countries.

Rehabilitation is a mixture of medicine, caring, physiotherapy and social working, and needs good team work. Forming a team and creating a team spirit can be very difficult, but the high motivation of the young medical staff should overcome all these difficulties.

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## References

- 1 Henderson V. *Basic Principles of Nursing Care*. International Council of Nurses: London, 1961.
- 2 *Nursing Practice*. Report of a WHO Expert Committee, Geneva, 1996; pp 3–12.
- 3 Hardy AG, Elson R. *Practical Management of Spinal Injuries, A Manual for Nurses*. Churchill Livingstone: Hong Kong, 1976; pp 65–100.
- 4 Platin N, Ocakci A, Güçsavaş N. Hemsirelerin 8 Saatlik Çalışma Sürelerinin İçerigi (The Distribution of Nurses Activities in 8 Hours). *Türk Hemsireler Dergisi (The Journal of Turkish Nursing) Özel Sayı* 1982; (suppl 2-3) pp 2–6.
- 5 Dogan S. *Bilinçsizlik ve Diğer Nedenlerle Yataga Bagimli Hastalarda Hemsirelik Girişimlerinin İncelenmesi (The Evaluation of Nursing Care Activities on Bed Dependent Patients Due to Unconsciousness and Other Reasons)*. A Thesis for Master Degree in Nursing. Gülhane Military Medical Academy, The Nursing College, Ankara, Türkiye, 1994.
- 6 King EM, Wieck L, Dyer M. *Illustrated Manual of Nursing Techniques*. J.P. Lippincott Co: Philadelphia, 1977.
- 7 Couldwell D, Carlisle M. Nursing Care of Spinal Cord Injuries. In Alderson JD, Frost EAM (eds). *Spinal Cord Injuries*. Butterworths Co; London, 1990; pp 126–138.
- 8 Bedbrook G. Fifty years on fundamentals in Spinal Cord Injury. Care is still important. *Paraplegia* 1992; **30**: 10–13.