

Frequency of neck pain in modern hijab wearing females in twin cities

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Objectives: To identify the frequency of neck pain associated with modern hijab in females of twin cities of Pakistan along with identification of risk factors.

Methodology: A total of 747 females participated from 4 different Universities of Rawalpindi and Islamabad were included in the study. The study duration was 6 months from January to June 2017. Northwick questionnaire for neck pain was used to assess the neck pain intensity, symptoms, numbness, impact on daily activities and social life. Statistical analysis was done on SPSS version 21.

Results: Out of 747 participants, 393(50.2%) females were covering their head with modern hijab. Type of head cover daily duration of hijab

were significantly associated with stiffness or discomfort in neck, restriction with movement, pain and stiffness in head and neck region and relief from pain after removal of hijab ($p < 0.05$). Intensity of pain, sleeping and pain, symptoms duration, carrying and reading or watching TV did not show any significant relationship with the type of head cover ($p < 0.05$).

Conclusion: Majority of the females cover their head with the accessories and these accessories causes the harmful effects on musculoskeletal system, contributing to neck pain. (Rawal Med J 202;45:71-73).

Keyword: Neck Pain, Hijab, Musculoskeletal Disorders.

INTRODUCTION

Neck pain is one of the most important public health concerns in our modern society. A study from Netherlands has shown that the work-related sickness leave cost along with medical expenses was 12 billion dollars and 40% cost was because of musculoskeletal disorders.¹ Within general population, 1-year prevalence for the neck pain is 29% in men and 40% within women.² Neck symptoms in sales people population was 54-76%.³ A study from Sweden showed prevalence to be 43% in the entire population and 38% in men and 48% in women.⁴ A Chinese study showed that the one-year prevalence of the neck pain was 15% in men and 17% in the women.⁵

Blau reported headache syndrome which was caused due to long duration of tying of hair in the form of ponytail or within bun and pain was relieved within the minutes of loosening hair.⁶ A study has been conducted on the headache caused by the hijab but no study has been performed to address the problem of neck pain caused by it.⁷

Hijab is a headscarf, which is worn by the Muslim girls as it helps them in maintaining their modesty

and privacy. The modern hijab has taken a different form and has been accessorized with large number of items to make it fancier and heavier.⁸ The two main objectives of this study were to determine the frequency of neck pain among Modern Hijab wearing females and to determine its association with neck pain.

METHODOLOGY

This descriptive cross-sectional study was conducted at Wish Campus, Al-Mizan Campus and G-7 Campus of Riphah International University and Fatima Jinnah Women University, Islamabad, Pakistan, from January to June 2017. Approval was obtained from the Ethics review committee. A written consent was taken from all participants. Females aged from 18 to 25 (Mean 21 ± 2.108) years with head cover, at least for three hours were included in the study. Those using it less than that time or having any diagnosed cervical pathology were excluded.

The data were collected by using Northwick Pain Questionnaire (NPQ). It consists of a total of 9 items that include pain intensity, symptoms duration, pain

affecting sleep, needles and pins numbness at the night time, effects over the carrying, social life, reading or watching, working and driving were also measured. Every question is scored from 0 to 4 with option 1 to option 5, respectively. For each item, it was five responses and the entire percentage of the response is measured by the NDQ score, which is calculated with addition of the scores of each item (0-36) and then the total percentage is calculated. It is a reliable and valid tool.

Statistical Analysis: Data were analyzed on SPSS version 21. Frequency were plotted for all categorical variables. Mean and standard deviation calculated for all numerical values.

RESULTS

Out of 747 females, 354(47.3) choose to wear simple dupatta whereas, 393(52.6) females preferred modern hijab. Majority of the females within the study were covering their head with the bun (50.3%) whereas, others were using ponytail (14.1%), tight hair style (9.8%), multiple loops (8.6%), cap (11.4%), tight scarf (4%) and other accessories (1.7%). Due to the stiffness and discomfort, 44.2% of females had restricted movement whereas, 55.8% had no restricted movement of neck.

Out of 747 females interviewed, 414 (55.41%) females suffered from pain and stiffness in the head and neck region and 333(44.60%) females reported the pain to be of mild level on the numeric rating scale. But when the hijab was removed, 68.3% got relief from their pain. Out of 747, 154 females wearing simple dupatta had neck pain & 207 females wearing modern hijab had neck pain (Fig. 1).

Fig. 1. Frequency of neck pain in females wearing simple and modern hijab.

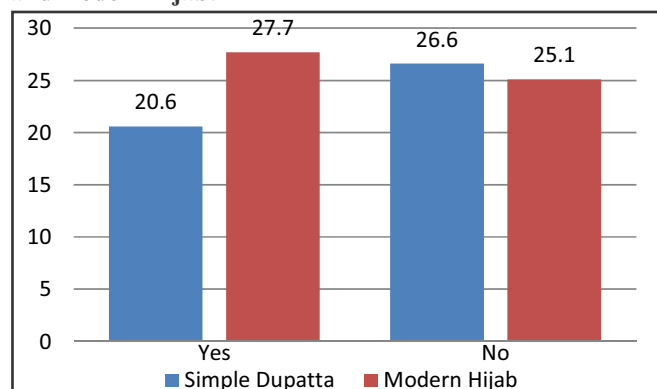
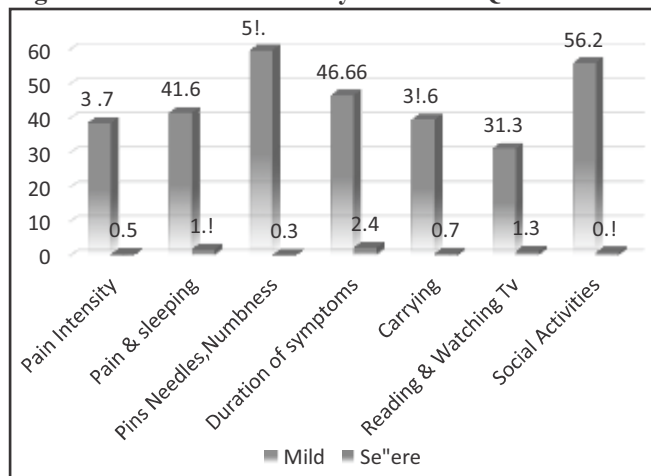


Fig. 2. Results of assessment by Northwick Questionnaire.



Out of 747 women, 38.7% showed mild pain and 0.5% had severe pain, 41.6% females had mild pain related to sleep and 1.9% had severe pain related to sleep issues (Fig. 2). Duration of wearing hijab was divided in to 3-5 hours, 5-8 hours and >8 hours. Majority of the females were wearing it for 5-8 (50.2%). Restriction was measured by asking participants to perform following movements: Touch the chin to the chest, look at the roof, touch the ear towards shoulder top and rotation of the head on the both sides.

DISCUSSION

In this study, 747 females were interviewed who were using head cover either with simple dupatta or with modern Hijab. A similar study from Canada showed higher prevalence of neck pain of 70% in young adults.⁹ A study from Norwegian and Finland reported that only 14% of the respondents had chronic neck pain, which is quite low.¹⁰

It was observed that the large number of females bound their hair with Bun or Jura (50.3%), adding more weight to their head and ultimately, it lead to neck pain. Similar studies have been reported which shows that increase of the weight overhead causes the increased neck pain. One study showed that the helmet mounted devices of the military pilots have been associated with increased incidence of neck pain (19.0%, 22.2%).¹¹ Hijab wearing is similar weight bearing action.

Our results showed that females, who covered their head with hijab for the total time of 5 to 8 hours, were more likely to develop neck pain. 50.2% females in

our study had reported that they cover their head from 5 to 8 hours in a day. This activity has been supported by a study which pointed out that the neck pain is more likely to occur within the high-performance aviators who work more than the others and this is how, large duration of carrying weight on the head leads to the increased incidence of neck pain.¹²

Our study found that 48.3% of females suffered from the discomfort in their head region and 44% females were experiencing restricted movement. The most common restriction was the movement of head to touch the chin to the chest which was observed in 36%. A similar study described the high incidence of neck pain related to the head mounted devices.¹³

Our findings also provide the strong evidence of the association between the type of head cover and 7 points of Northwick questionnaire. The relationship between the back pain and numerous other risk factors has been observed at large but our study provides the relationship of the neck pain with the other risk factors and it explains strong discomfort in head or neck region due to the hijab.¹⁴

CONCLUSION

Increase in the weight on the head caused an increase in the neck pain in order to balance the head. Modern Hijab has been considered as one of the most important factor leading towards neck pain. The increased duration of hijab and different accessories are also the most contributing risk factors in causing neck pain.

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