

Melanoma:
The Influence of Socioeconomic Status on Incidence and Prognosis
By Tracey Boyle-Harvey

Introduction

New Zealand has recently overtaken Australia as the country with the highest rates of melanoma in the world (Whiteman, Green, & Olsen, 2016). It is the most common form of cancer in males aged 25-44, and second most common form of cancer in females aged 45-64 nationally (Ministry of Health, 2016). These statistics provide a glimpse into the impact that melanoma has on New Zealanders and led me to research further on the topic. The PICOT model was used to create the research question: ‘When comparing low and high socioeconomic groups, what factors influence melanoma incidence and prognosis?’.

What factors influence melanoma incidence and prognosis in those of a lower socioeconomic group?

- Education: Baumert, Plewig, Volkenandt and Schmid-Wendtner (2007) found that those who had a lower level of education were more likely to be diagnosed with a larger tumour, than those with a higher level of education.
- Tumour thickness: Mandala et al. (2011) found in their study that 27.5% of those in a lower socioeconomic status had a Breslow thickness greater than 3mm, compared to 9.41% in those of a higher socioeconomic status.

Recommendations

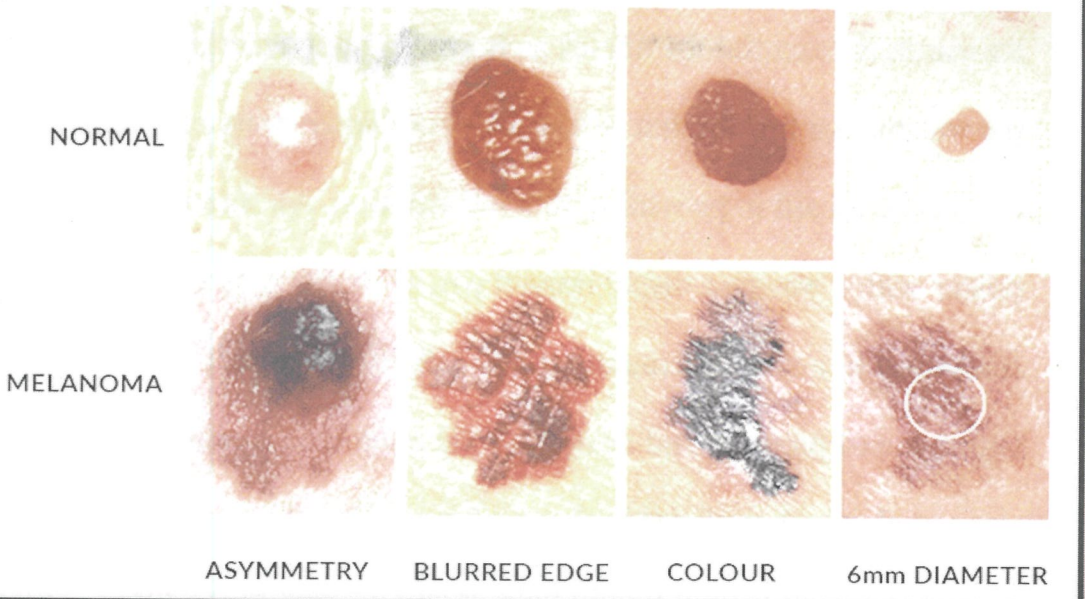
- Melanoma is more likely to be diagnosed at a later stage in those of a lower socioeconomic status, therefore nurses could give melanoma education surrounding regular mole checks, irregular mole patterns and changes to be aware of.
- Due to the increased incidence of melanoma in those of a higher socioeconomic status, a particular focus for this demographic could be preventative measures such as education on the importance of being sun smart, avoiding being sun burnt and regular mole checks.

As nurses we can also educate ourselves on:

- Developments regarding melanoma prevention and detection
- Effective health education resources and teaching techniques for clients
- Inequalities in health outcomes due to socioeconomic status

What factors influence melanoma incidence and prognosis in those of a higher socioeconomic group?

- Incidence: Blakely et al. (2010) found that in New Zealand, those with a high income had a melanoma incidence of 1 quarter to 1 third higher than low income earners. This trend was also found by Hausauer, Swetter, Cockburn and Clarke (2011).
- Ultraviolet radiation: Hausauer et al. (2011) also found that those from a high socioeconomic status and neighbourhoods with high ultraviolet radiation exposure were 73% more likely to develop melanoma than those from a low socioeconomic group and neighbourhoods with high ultraviolet radiation exposure.



Conclusion

As evidenced by the above research, melanoma incidence is higher in those of a higher socioeconomic status and melanoma prognosis is poorer in those of a lower socioeconomic status. Overall, the impact of melanoma can be devastating no matter a person’s socioeconomic status. Awareness around melanoma prevention is vital to help decrease the risk. Nurses can promote awareness through performing melanoma health education which provides clients with the skills and knowledge to help prevent and detect melanoma.

References

Baumert, J., Plewig, G., Volkenandt, M., & Schmid-Wendtner, M. H. (2007). Factors associated with a high tumour thickness in patients with melanoma. *British Journal of Dermatology*, 156(5), 938-944.

Blakely, T., Shaw, C., Atkinson, J., Tobias, M., Bastiampillai, N., Sloane, K., Sarfarti, D., & Cunningham, R. (2010). *Cancer trends: Trends in incidence by ethnic and socioeconomic group, New Zealand 1981-2004* (Ministry of Health report). Wellington: University of Otago and Ministry of Health.

Hausauer, A. K., Swetter, S. M., Cockburn, M. G., & Clarke, C. A. (2011). Increases in melanoma among adolescent girls and young women in California. *Jama Dermatology*, 147(7), 783-789.

Mandala, M., Imberti, G. L., Piazzalunga, D., Belfiglio, M., Lucisano, G., Labianca, R...Tondini, C. (2011). Association of socioeconomic status with Breslow thickness and disease-free and overall survival in state I-II primary cutaneous melanoma. *Mayo clinic proceedings*, 86(2), 113-119.

Ministry of Health. (2016). *Cancer: New registrations and deaths 2013*. (Ministry of Health report). Wellington, New Zealand: Author.

Whiteman, D. C., Green, A. C., & Olsen, C. M. (2011). The growing burden of invasive melanoma: projections of incidence rates and numbers of new cases in six susceptible populations through 2031. *Journal of Investigative Dermatology*, 136(6), 1161-1171.

PICOT	Question	Explanation
Population	All individuals diagnosed with melanoma above 15 years of age.	The decision to exclude melanoma cases under 15 years of age was due to the limited rate of melanoma in this age range and therefore limited research on the impact of socioeconomic status and factors at this age. Melanoma was chosen as a research topic due to the high rates of diagnosis in New Zealand.
Intervention (Exposure)	High and low socioeconomic status	Socioeconomic status was chosen due to the wide-ranging and significant impact it can have on health outcomes. Comparing the two socioeconomic status' will help reveal differences in incidence and prognosis, and therefore help shape the melanoma education given to these two groups.
Comparison/ Control	Low socioeconomic status rates of melanoma incidence and prognosis will be compared against high socioeconomic status rates of melanoma incidence and prognosis.	This comparison will highlight differences in melanoma incidence and prognosis across the socioeconomic status'.
Outcome	To identify the socioeconomic status with the highest incidence of melanoma and better prognosis outcomes.	The outcome of this comparison will identify the rates of melanoma incidence and prognosis in the two-socioeconomic status' and factors impacting on these differences. Identifying these factors will help health professionals discover areas where education is needed to help improve melanoma rates.
Time	Not applicable	Time is not relevant to the research topic

(Schneider & Whitehead, 2013)

Rationale

Research is essential for nurses as it guides their practice to be evidenced based. An important aspect of nursing research is providing the results in a format that is impactful and informative to transfer the knowledge and inform evidence based practice. The use of posters can be an aid in providing this information. An important aspect of a poster is the design and visual impact (Rowe & Illic, 2011). A poster with a positive visual impact can stimulate interest in the presented topic and can build on this interest through providing key information in a succinct manner (Rowe & Illic, 2011). Creating a positive visual impact can be achieved through appropriate colour designs, use of pictures and designing the content in a manner that is easy to read (Betz, Rickey & Smith, 2011). The use of a visual medium can also be beneficial to those who are visual learners (Betz, Rickey & Smith, 2011). I chose to use a poster presentation as I thought a visual format would help create interest in my topic, deliver the information in a succinct and impactful manner and appeal to a wide variety of people through the mix of text and visual images.

References

- Betz, C. L., Rickey, T., & Smith, K. A. (2011). Step six: Disseminating evidence and evidence-based practice implementation outcomes. In B. M. Melnyk, & E. Fineout-Overholt (Eds.), *Evidence-based practice in nursing & healthcare* (2nd ed., pp 355-395). Philadelphia, USA: Lippincott Williams & Wilkins.
- Rowe, N., & Illic, D. (2011). Poster presentation – a visual medium for academic and scientific meetings. *Paediatric Respiratory Reviews*, 12(2011), 208-213.
- Schneider, Z., & Whitehead, D. (2013). Identifying research ideas, questions, statements and hypotheses. In Z. Schneider, D. Whitehead, G. L. Biondo-Wood, & J. Haber (Eds.), *Nursing and midwifery research: Methods and appraisal for evidence-based practice* (4th ed., pp 57-73). Sydney, NSW, Australia: Mosby.