Fashion Technology and Health

Aurora C Paillard*

University of the Arts London, UK

Submission: February 02, 2018; **Published:** March 01, 2018

***Corresponding author:** Aurora C Paillard, University of the Arts London, London College of Fashion 20 John Prince's St, London W1G 0BJ, UK, Tel: 020 7514 7400; Email: a.paillard@fashion.arts.ac.uk

Abstract

Fashion is commonly seen as the key of consumerism and capitalism. However, Fashion also has the power of improving people's health and help patients with health issues. The current Opinion letter underlines how fashion technology and textiles can be used to challenge the world of Fashion and Health.

Keywords: Fashion technology; Health

Introduction

"It started when a (Fashion) professor of mine challenged us to do something that would change the world – I thought: 'How can I do that? This is Fashion.'" Lucy Jones.

Fashion is commonly seen as being frivolous, being the key of consumerism and capitalism. However, Fashion is also extremely powerful and has the potential of improving people's health and help patients with health issues. In fact, thanks to fashion technology and textiles, Fashion designers have the possibility in challenging the world of Fashion and Health.

Wearable technology

The rise of obesity and physical inactivity has become a very serious worldwide health issue. As Hallal et al. [1] underlined, 31.1% of adults in the world, ranging from 17% in south East Asia to 43% in the USA and the eastern Mediterranean, are physically inactive. Technology can help people being more engaged with physical activity. For example, Internet and mobile phone technology have been proven efficient in increasing and maintaining the level of physical activity in healthy adults [2]. What about Fashion? Can't we use wearable technology to enhance even more people's engagement with physical activity?

Traditional wearable devices have been usually described as uncomfortable for long-term wearing and of insufficient accuracy. However, since 2000's, intelligent biomedical clothing related to the health sector have arisen, creating fashion trends, wearing, using, and displaying health-cause clothing and accessories; e.g. monitor user's body fat distribution, muscular activity and position changes to diagnose health status, or wearable solution for ECG monitoring clothing. Engineering research about wearable health technology have greatly progressed the past decade [3-6]. It is now necessary to further investigate the consumer behaviour towards such technology and assess its efficiency in tackling the issue of physical inactivity.

Fashion textiles

In addition to wearable technology, Fashion textiles could be used to help people with health issues, particularly people with Autism Spectrum Disorder, dementia, or physical disability.

Autism Spectrum Disorder (ASD) is defined as a developmental disorder which led to abnormal interpersonal and emotional interaction, disordered language and communication, and repetitive behaviour (American Psychiatric Association, 2014). As individuals with ASD are oversensitive to loud noise, colours, and touching, it makes sense to suggest that Fashion would be a helpful tool for them. Shin et al. [7] have tested therapy clothing products with ASD children. Even if further research would be necessary to develop sensory clothing prototype, these authors underlined that choosing specific size, colours, and fabrics can lower down the stress and overwhelming negative emotional state in children with ASD.

Fashion textiles can also help patients with dementia. Indeed, research has showed the positive impact of accessories, such as handbags, as materialisation of memories in people with dementia [8]. As underlined by Twigg [9], more research about clothing textiles for people with dementia would be very interesting.

Bio-textile research has showed interesting outcomes in the detection, monitoring and analysis of sweat [10-12]. It would be very interesting to see whether such Fashion technology can be used for health in order to prototype bio-textile which could detect micro-fluid and help people with diabetes for example.

The last but not the least, anecdotal reports highlight how difficult it is for people with physical disability to find 'easy-to-fit' or 'easy-to close' clothes. Fashion has been mainly designed so far for non-disabled people, but should be more inclusive and should consider any consumer. People with physical disability particularly suffer from depression, low self-esteem, negative body image and social stigma [13-15]. Having an easier access to Fashion and being considered as any other consumer would help people with physical disability [16].

Conclusion

On one hand, there is a need for Fashion to be more inclusive; on the other hand, Fashion has the power to help people with health issues and to improve health monitoring. A few Fashion designers, such as Maura Horton and her company Magna Reader, Lucy Jones, the Open Style Lab (openstylelab.com) in the MIT International Design Centre; have used their skills for disabled people. Considering Fashion and Health together would be a wonderful, if not necessary, progress of the Fashion industry.

Conflict of Interest

There is no economic interest of any conflict of interest in this paper.

References

1. Hallal PC, Andersen LB, Bull FC, Guthold R, Haskell W, et al. (2012) Lancet Physical Activity Series Working Group. Global physical activity levels: surveillance progress, pitfalls, and prospects. The lancet 380(9838): 247-257.

2. Hurling R, Catt M, De Boni M, Fairley BW, Hurst T, et al. (2007) Using internet and mobile phone technology to deliver an automated physical activity program: randomized controlled trial. J Med Internet Res 9(2): e7.

3. Jovanov E, Milenkovic A, Otto C, De Groen P, Johnson B, et al. (2006) A WBAN System for Ambulatory Monitoring of Physical Activity and Health Status: Applications and Challenges. Conf Proc IEEE Eng Med Biol Soc 4: 3810-3813.

4. Limberis A, Dittmar A (2007) Advanced wearable health systems and applications-research and development efforts in the European union. IEEE Engineering in Medicine and Biology Magazine 26(3): 29-33.

5. Lymberis A, Olsson S (2003) Intelligent biomedical clothing for personal health and disease management: state of the art and future vision. Telemed J E Health 9(4): 379-386.

6. Park S, Jayaraman S (2010) Smart textile-based wearable biomedical systems: a transition plan for research to reality. IEEE transactions on information technology in biomedicine 14(1): 86-92.

7. Shin SJH, Smith B, Gaines K (2015) Investigation of therapy clothing products for children with autism spectrum disorders.

8. Buse C, Twigg J (2014) Women with dementia and their handbags: Negotiating identity, privacy and 'home' through material culture. J Aging Stud 30: 14-22.

9. Twigg J (2010) Clothing and dementia: A neglected dimension?. Journal of Aging Studies 24(4): 223-230.

10. Curto VF, Coyle S, Byrne R, Angelov N, Diamond D, et al. (2012) Concept and development of an autonomous wearable micro-fluidic platform for real time pH sweat analysis. Sensors and Actuators B. Chemical 175: 263-270.

11. Morris D, Coyle S, Wu Y, Lau KT, Wallace G, et al. (2009) Bio-sensing textile based patch with integrated optical detection system for sweat monitoring. Sensors and Actuators B: Chemical 139(1): 231-236.

12. Priniotakis G, Westbroek P, Van Langenhove L, Kiekens P (2005) An experimental simulation of human body behaviour during sweat production measured at textile electrodes. International Journal of Clothing Science and Technology 17(3/4): 232-241.

13. Nelson M, Gruver GG (1978) Self-esteem and body-image concept in paraplegics. Rehabilitation Counseling Bulletin 22(2): 108-113.

14. Rybarczyk B, Nyenhuis DL, Nicholas JJ, Cash SM, Kaiser J (1995) Body image, perceived social stigma, and the prediction of psychosocial adjustment to leg amputation. Rehabilitation Psychology 40(2): 95-110.

15. Taleporos G, McCabe MP (2001) The impact of physical disability on body esteem. Sexuality and disability 19(4): 293-308.

16. (1994) American Psychiatric Association. Diagnostic and statistical manual of mental disorders, (4th edn): American Psychiatric Association, Washington, DC, USA.

Your next submission with Juniper Publishers will reach you the below assets

- Quality Editorial service
- Swift Peer Review
- Reprints availability
- E-prints Service
- Manuscript Podcast for convenient understanding
- Global attainment for your research
- Manuscript accessibility in different formats
  (Pdf, E-pub, Full Text, Audio)
- Unceasing customer service

Track the below URL for one-step submission
https://juniperpublishers.com/online-submission.php