

The Effect of Facial Paralysis on Career Success: A Preliminary Investigation

Cramer Kallem and Kathleen Bogart PhD
Oregon State University

Introduction

It is well established that facial expression is an important factor in social interaction. However people with Moebius Syndrome, a condition that causes facial paralysis (FP) have difficulty forming facial expressions, which can make social interaction difficult. Previous research has found that people often form inaccurate and negatively biased impressions of people with FP (e.g. Bogart, Tickle-Degnen & Ambady, 2014). However relatively little research has investigated specific social consequences of having FP. Several studies have shown that people with disabilities tend to have lower incomes than people living without a disability (e.g. Parish, Grinstein-Weiss, Yeo, Rose & Rimmerman, 2010; Gannon & Nolan, 2007). This study will (to our knowledge) be the first to look into whether or not an income and/or occupational prestige disparity exists between people with and without FP. We will also investigate what factors (if any) predict a higher (or lower) income and level of occupational prestige among people with FP.

Hypothesis 1: People with Moebius will tend to have a lower income and level of occupational prestige than people without FP. Previous research suggests that extraversion is positively correlated with salary and number of promotions (Ng, Eby, Sorenson & Feldman, 2005). However a study by Bogart and Tickle-Degnen (2015) found that people with facial paralysis are perceived as less extraverted by others. Also, it has been well established that people with disabilities tend to have lower incomes than those without a disability (e.g. Parish, Grinstein-Weiss, Yeo, Rose & Rimmerman, 2010; Gannon & Nolan, 2007) and there is no evidence to suggest that people with FP will be an exception to this tendency.

Hypothesis 2: We predict that people with more severe facial paralysis will have lower incomes and less prestigious jobs than those with less severe conditions. This is because the increased expressivity is likely to improve social interaction and therefore decrease stigma, which may in turn improve career success. We also predict that those with comorbid symptoms/conditions (such as autism, depression, or anxiety) will have lower incomes than those without these additional conditions.

Methods

Participants/Data

Two data sets were used for this study. One data set was collected in 2014 and included 45 participants with Moebius Syndrome. 30 participants were female and the other 15 were male. The mean age was 41.4 years old. There were a total of 20 participants who were out of the workforce at the time: n=3 were retired, n=9 were students, n=5 were homemakers/stay at home parents, and n=3 reported being unemployed/not working.

Methods

The second data set served as a control group, consisting of parents of people who have Moebius, which was collected at the same time as data set one. This data set was comprised of 54 participants including 45 females and 9 males. The mean age was 42.1 years old. In total 13 participants were not in the workforce at the time: n=3 were retired and n=10 reported being a homemaker/stay at home parent.

The participants completed an online survey in 2014 (for a previous study) in which they reported a large amount of demographic information to be used in future studies. The questions used to test our hypotheses included: What is your occupation? What is your household income before taxes? The comorbid conditions variable was coded by adding up how many other conditions they reported having including: anxiety, depression, autism, learning disabilities, intellectual disabilities. The expressivity variable (to test symptom severity) was coded by adding up the participants answers to the following statements, which they responded to using a 5-point scale (5 being the least severe option): I can move my eyes side to side; I can close my eyes completely; I can raise my eyebrows; I can lower my eyebrows; I can wrinkle my nose; I can close my lips; I can smile; I have difficulty eating (this was reverse scored); and people can understand my speech.

Procedures

In order to get an estimate of their occupational prestige levels, the first author and two other independent coders searched through the most recent NORC study on occupational prestige (Smith & Son, 2014) and matched each participant's reported occupation to the closest occupation title in the NORC study; disagreements between coders regarding occupational matches were resolved through discussion and their prestige scores were then recorded.

In addition to using the parents as a control group, the three coders also matched the participant's occupations to the most similar occupation title in the U.S. Bureau of labor statistics' annual wage estimates (2013). The mean salary was then recorded to see if people with Moebius made less than the national average of others with the same occupation. Disagreements between coders were again resolved by discussion.

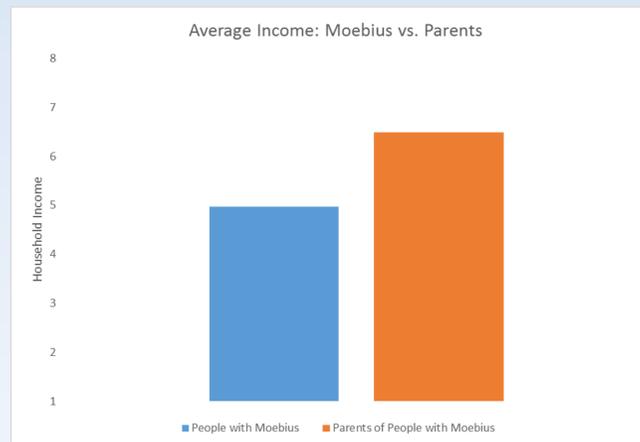
Results

Hypothesis 1: The adults with Moebius Syndrome had significantly lower incomes than the parent group (p-value < .05). These results remained true when participants who were out of the workforce were removed from the analysis (p-value < .05). People with Moebius also had significantly less prestigious occupations than the parent groups (p-value < .05).

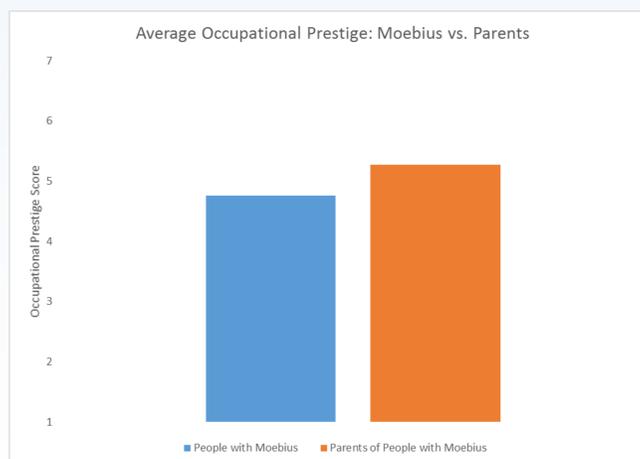
Results

However there was no difference in the incomes of those with Moebius Syndrome from the national average of others working in the same occupation after controlling for their partner's contribution to the household income (for those who reported being married).

Hypothesis 2: Among the participants with Moebius, there was no significant correlation between occupational prestige and symptom severity, nor was there a significant relationship between having comorbid conditions and occupational prestige. The same is true for the relationship between household income and symptom severity. However there was a marginally significant negative correlation between income and having other conditions (p-value = .085).



Note that the intervals on the y-axis represents the 8-point scale in which the participants reported their gross household income (before taxes): 1 = under \$10,000; 2 = \$10,000 to \$20,000; 3 = \$20,001 to \$30,000; 4 = \$30,001 to \$45,000; 5 = \$45,001 to \$60,000; 6 = \$60,001 to \$75,000; 7 = \$75,001 to \$90,000; 8 = over \$90,000.



Note that the intervals on the y-axis represent the NORC occupational prestige scores on a 7-point scale.

Results

	Prestige	Income	Relationship	Age	Gender	Education	Expressivity
Income	.14						
Relationship	.02	.28					
Age	.30	.31*	.59**				
Gender	.06	.09	-.30*	-.23			
Education	.62**	.21	-.02	.16	.21		
Expressivity	-.06	.13	.01	-.32*	-.02	0	
Other Conditions	-.13	-.26	-.06	-.11	.13	-.12	.10

* p-value ≤ .05
** p-value ≤ .01

Discussion

Our first hypothesis was somewhat supported. Our results suggest that people with Moebius Syndrome have lower salaries and levels of job prestige than people without Moebius. However there was no evidence to support that there is a difference in income between people with and without Moebius who have the same occupation. This could suggest that because people with Moebius tend to have less prestigious occupations, they tend to have lower incomes as a result.

We did not find any support for our second hypothesis. Although none of these correlations reached significance, they were all in the expected direction (except for the relationship between job prestige and symptom severity). It is possible that by replicating this study and correcting some methodological issues, these correlations would reach significance.

Limitations

The main limitation of this study is that the data sets were not collected with the intention of studying career success. If participants were asked what their exact income is (rather than reporting their household income on an 8-point scale), this would allow for more subtle differences in income to be detected. Also some participants were vague when reporting their occupation title, which made the coding process more difficult and less precise. Perhaps this issue could be addressed by having the participants provide a more detailed description of their occupation.

Future Directions

An interesting follow-up study could include participants with several different conditions that cause facial paralysis, which would allow us to compare the effects of having unilateral vs bilateral FP or the effects of having congenital vs. acquired conditions on career success.

Acknowledgements

Erika Frandrup
Mika Kousha
Natalie Weber