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BIOLOGICAL AND PSYCHOSOCIAL CORRELATES OF GENDER-VARIANT AND GENDER-TYPICAL IDENTITIES

A thesis presented in fulfilment of the requirements for the degree of Doctor of Philosophy in Psychology at Massey University, Albany New Zealand

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ABSTRACT

The aim of this thesis is to examine biological and psychosocial factors that contribute to the development of gender-variant or gender-typical identities. Blanchard’s autogynephilia theory (Blanchard, 1989b) suggests that these factors are different in birth-assigned males with different sexual orientations. Previous research has found that genetics, prenatal hormone exposure, neuroanatomy, handedness, dermatoglyphics, fraternal birth order, and abuse are related to gender identity. While a number of investigators have studied these variables individually, this is the first known study to have examined the inter-relationships of these variables in one sample and to include participants with a wide range of gender identities. Data were collected from a convenience sample of 2,277 online-recruited participants with gender-variant and gender-typical identities using an online questionnaire. Participants were mainly white/Caucasian (92%) adults living in the USA (54%) and New Zealand (19%). From the results, reported family concordance for gender-variance and a systematic review of case reports of twins with gender-variant identities indicated genetic determinants of gender identities. Finger-length ratio, systemising, and a systematic review of case-reports of gender identity outcomes for adults with intersex and related conditions indicated prenatal hormone determinants of gender identities. Further evidence for biological factors came from elevated levels of non-right handedness among birth-assigned females with gender-variant identities. Structural equation modelling showed that the positive relationship between abuse experience and degree of adult gender-variance was partially mediated by recalled childhood gender-variance. This suggests abuse may be a cause as well as a result of gender-variance. Contrary to Blanchard’s theory, there were no differences in biological and psychosocial factors between birth-assigned male participants of different sexual orientations. This was the first research to find evidence that biological and psychosocial factors are the same for transsexuals as for persons with other gender-variant identities. Overall, these findings add support for a biological predisposition for gender-variant and gender-typical identities. Psychosocial determinants are likely to be complex and work in interaction with biological factors.
ACKNOWLEDGEMENTS

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<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
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<tbody>
<tr>
<td>17β-HSD</td>
<td>17β hydroxysteriod dehydrogenase</td>
</tr>
<tr>
<td>5α-RD</td>
<td>5α reductase deficiency</td>
</tr>
<tr>
<td>2D:4D</td>
<td>ratio between the length of the second and fourth fingers</td>
</tr>
<tr>
<td>BIDR</td>
<td>balanced inventory of desirable responding</td>
</tr>
<tr>
<td>BSTc</td>
<td>central subdivision of the bed nucleus of the stria terminalis</td>
</tr>
<tr>
<td>CAH</td>
<td>congenital adrenal hyperplasia</td>
</tr>
<tr>
<td>CI</td>
<td>confidence intervals</td>
</tr>
<tr>
<td>DZ</td>
<td>dizygotic</td>
</tr>
<tr>
<td>FM</td>
<td>female-to-male</td>
</tr>
<tr>
<td>INAH-3</td>
<td>interstitial nucleus of the anterior hypothalamus nuclei 3</td>
</tr>
<tr>
<td>MF</td>
<td>male-to-female</td>
</tr>
<tr>
<td>MGD</td>
<td>mixed gonadal dysgenesis</td>
</tr>
<tr>
<td>MZ</td>
<td>monozygotic</td>
</tr>
<tr>
<td>OGV</td>
<td>other gender-variant identity</td>
</tr>
<tr>
<td>PAIS</td>
<td>partial androgen insensitivity syndrome</td>
</tr>
<tr>
<td>PCOS</td>
<td>polycystic ovary syndrome</td>
</tr>
<tr>
<td>SE</td>
<td>standard error</td>
</tr>
<tr>
<td>SEM</td>
<td>structural equation modelling</td>
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