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Pedophilia, Height, and the Magnitude of the Association: A Research Note

Ian V. McPhail^a & James M. Cantor^{ab}

^a Centre for Addiction and Mental Health, Toronto, Ontario, Canada

^b University of Toronto, Toronto, Ontario, Canada

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Pedophilia, Height, and the Magnitude of the Association: A Research Note

Ian V. McPhail

Centre for Addiction and Mental Health, Toronto, Ontario, Canada

James M. Cantor

*Centre for Addiction and Mental Health, Toronto, Ontario, Canada,
and University of Toronto, Toronto, Ontario, Canada*

Physical height is a manifestation of *in utero* and childhood conditions, and pedophilic individuals have generally been reported to be of lesser height. Jung, Klaver, and Pham (2014), however, report findings that fail to support an association between pedophilia and height. In the present note, we examine the methodology and findings of Jung et al. To estimate the magnitude of the pedophilia–height association, we conducted a meta-analysis of the published literature and found a significant effect size. Our findings suggest pedophiles may experience conditions during *in utero* and childhood development that are capable of influencing their physical development.

Jung, Klaver, and Pham (2014) tested for the presence of an association between pedophilia and physical height in a sample of sexual offenders. Based on their null finding, Jung et al. suggest that there is insufficient evidence to conclude that height is a reliable marker of pedophilic individuals being exposed to suboptimal conditions during prenatal and childhood development. Those authors further suggest that a re-examination of the pedophilia–height association as a biological pedophilogenic factor is warranted. However, in their study, pedophilic offenders' and non-pedophilic offenders' height ($m = 175.5$ cm and 177.0 cm, respectively) were remarkably similar to the height of pedophilic sexual offenders and teleiophilic sexual offenders ($m = 175.6$ cm and 176.9 cm, respectively) reported in a separate study examining the association between pedophilia and height (Cantor et al. 2007). The conclusion by Jung et al. that their findings represent a failure to replicate the findings of Cantor et al. (2007) appears unwarranted. The following presents a critique of the study conducted by Jung et al. and provides a quantitative summary of the available literature. These provide the evidence that there is, in fact, consistency across study findings and that the current state of the science supports the association between pedophilia and height.

As with any study, Jung et al.'s study is not free from methodological imperfections. The most important problem in their design is the grouping methods used to examine the association between pedophilia and height. Problems in grouping participants are vitally important

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Address correspondence to Ian V. McPhail, Department of Psychology, University of Saskatchewan, 9 Campus Drive, Arts Building Room 154, Saskatoon, SK S7N 5A5, Canada. E-mail: ivmcp@mail@gmail.com

because those individuals with pedophilic interests need to be accurately identified to make valid conclusions regarding this association. First, we must recognize that phallometric data were not available for this sample; this is a limitation that Jung et al. acknowledged from the outset, and they attempted to provide solutions to by using various indicators of pedophilic interests. While the study did propose to use valid indicators of pedophilic interests, these indicators are less accurate than phallometry in identifying individuals with pedophilic erotic interests. For instance, the SVR-20 item, Sexual Deviation, was used to group participants into those who exhibited sexual deviation and those who did not, according to the scoring of this item (see Boer et al. 1997). Unfortunately, the SVR-20 item allows for scoring the presence of sexual deviation based on deviant sexual interests or behaviour other than pedophilia. Sexual offenders may receive a score indicating presence of sexual deviation due to behavioural or psychodiagnostic evidence for sexual sadism, frotteurism, exhibitionism, or pedophilia, to name a few. While likely unintentional, Jung et al. give the impression that this method grouped participants into pedophilic and non-pedophilic sexual offenders; however, this is potentially not the case, and the inclusion of non-pedophiles could reduce the magnitude of the differences observed. Likewise, the grouping of the sample according to those with and without child pornography offences is a less than ideal test, as this is only an approximation of direct, phallometrically assessed pedophilic interests. We would argue these methods of grouping participants may be unlikely to accurately identify pedophilic individuals, as a result, limiting our ability to draw inferences from the results stemming from these two grouping methods.

The use of the Screening Scale for Pedophilic Interests (SSPI; Seto and Lalumière 2001) is also problematic in this study and merits comment. While likely an acceptable substitute for phallometric testing for research purposes, the SSPI is only moderately correlated with phallometrically assessed pedophilic interests ($r = .34$, Seto and Lalumière 2001), making it an efficiently scored, but still limited, measure of pedophilic interests. A more important limitation, however, is how the SSPI appears to be used in this study. The SSPI was developed on a sample of, and was intended to be used with, sexual offenders with child victims (age 14 or younger). Extrapolating from the degrees of freedom value for the correlation between SSPI total scores and physical height provided by Jung et al. (2014), it appears that the SSPI was scored on almost the entire sample, which included sexual offenders against adults. The reason for scoring the SSPI with the sexual offenders with adult victims is unclear and may feasibly have skewed the distribution of scores (i.e., many of the 154 sexual offenders with SSPI scores would have received a score of “0” or “1”). Using a correlational analysis to examine the direction and magnitude of the relationship between pedophilia and physical height may have been suboptimal under these conditions, as increased skew attenuates the correlation value (Kendall and Stuart 1968; Sommer and Sommer 2002) and reduces statistical power (Chok 2010). A more sound means of utilizing the SSPI in this study would likely have been to use the measure with only those with child victims and to group this sample into those who are “pedophilic” (SSPI scores of 4 or 5) and “non-pedophilic” (SSPI scores of 0–3). This grouping method may have yielded more valid results, as the SSPI appears to have adequate specificity and sensitivity for identifying those with phallometrically assessed pedophilic interests (Seto and Lalumière 2001). It is also important to note that all of these methods are less valid than phallometry, which is widely acknowledged as the gold standard, and which was used by Cantor et al. (2007). Using suboptimal methods of identifying pedophilic individuals limits the confidence we have in the conclusions reached by Jung et al.

Lastly, Jung et al. make a minor misinterpretation of Cantor and colleagues' (2007) discussion of the implication of their findings for clinical interventions with pedophilic individuals. The finding that pedophilic individuals are shorter is consistent with an understanding of this erotic age-orientation is acquired early in life and is immutable, comparable to male hetero- or homosexual orientations. In turn, evidence for the association between pedophilia and height supports an approach to treating pedophilic individuals that focuses on helping these individuals manage their sexual interests rather than attempts to convert pedophilic individuals into non-pedophilic individuals. While the clinical and policy implications of evidence for an association between pedophilia and height are indeed indirect, there are important implications that follow from the consistent conclusion pedophilia is caused, at least in part, by biological factors (Cantor et al. 2008).

ADVANCING SCIENCE: SUMMARIZING THE ASSOCIATION BETWEEN PEDOPHILIA AND HEIGHT

Despite the above-noted methodological limitations in Jung et al.'s study, a surprising result emerged. As noted in the introductory paragraph above, pedophilic offenders' and non-pedophilic offenders' heights ($m = 175.5$ cm and 177.0 cm, respectively) are almost identical to those found in Cantor et al. (2007; $m = 175.6$ cm and 176.9 cm, respectively). Taken together, these two studies arrived at virtually identical observations, despite Jung et al.'s conclusion that their findings do not provide evidence for an association between pedophilia and physical height. We would argue against this interpretation of their results, as there are some important limitations with relying solely on significance testing for data interpretation (Cumming 2014).

Cumming (2014) has recently argued that meta-analytic thinking is vital to the advancement of psychological science. Meta-analytic thinking involves considering a single study as building on the findings of past studies, improving the accuracy of the effect size estimating the strength of a relationship. We argue that Jung et al.'s analytic strategy and interpretation relies too singly on the results of significance testing and is an example of limitations of non-meta-analytic thinking. While Jung et al. do not make strong conclusions based on their finding, their interpretation of their finding and how these relate to prior findings is likely biased due to the reliance on significance testing. Their main conclusion is found on the final page of the article: "Our examination of the association between physical height and pedophilia, seen in the published literature, did not produce significant findings. Although our findings are limited by the retrospective data and smaller sample of pedophilic sex offenders, it is important to re-examine this association given its implications regarding biological pedophilogenic factors" (Jung et al. 2014:329). Given the above-noted similarities between the height deficits displayed by pedophilic sexual offenders and the reliance on significance testing, a re-examination of the association between pedophilia and height does not seem warranted at this time.

Perhaps it would be of more value to provide a meta-analytic summary of the studies published to date to improve the accuracy of the estimate for the association between pedophilia and physical height. Given there are four published studies comparing pedophiles with non-pedophiles in terms of their physical height (Cantor et al. 2007; Jung et al. 2014; Mellan, Nedoma, and Pondělickova 1969; Taylor et al. 1993), we are able to provide a meta-analytic summary of this small body of literature. The aggregate effect size we present summarizes the magnitude of the

difference between pedophilic individuals and non-pedophilic individuals.¹ Taken together, the studies produced a small, significant aggregate effect size for the relationship between pedophilia and physical height ($d = 0.210$, 95% Confidence Intervals = 0.083–0.338, $n = 982$). This aggregate effect suggests that pedophilic individuals are shorter than non-pedophilic individuals on average. Importantly, there was markedly little heterogeneity between the magnitude of the individual study effect sizes ($Q = 2.02$, $p = .588$, $I^2 = 0.00$). The lack of heterogeneity between the magnitudes of effect sizes produce by the individual studies suggests that there is consistency in the magnitude of the findings across studies. This consistency is surprising unto itself, given the variety of methods used in these four studies to identify pedophilic individuals and increases our confidence that physical height may be a reliable marker of suboptimal developmental conditions for pedophilic individuals. Taken as a whole, the results found in the literature is contrary to Jung et al.'s conclusion that physical height is not a reliable measure of adverse developmental conditions.

Also of interest is the difference in actual height between pedophilic and non-pedophilic individuals, as being shorter than average has been associated with a number of adverse prenatal and childhood experiences (see Cantor et al. 2007). A second means of aggregating the data presented in these studies is to compute a weighted mean using the group height data for pedophilic and non-pedophilic samples. When the means of the physical height data presented in these four studies were combined, the pedophilic samples were 1.71 cm shorter than the non-pedophilic samples ($m_{\text{pedophilic}} = 174.13$ cm, $n = 423$; $m_{\text{non-pedophilic}} = 175.84$ cm, $n = 559$). Cantor et al. (2007) provided useful comparisons to place this difference in height in perspective: mothers who smoke 20 cigarettes per day or more during pregnancy produce male offspring approximately 1.1 cm shorter than mothers who did not smoke during pregnancy (Fogelman and Manor 1988); and males born into families with alcohol problems are approximately 0.9 cm shorter than average (Silventoinen, Lahelma, and Rahkonen 1999).

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¹All analyses were conducted using the Comprehensive Meta-Analysis statistical software (Biostat 2006). We followed standard meta-analytic methods for appropriately extracting statistical data from individual studies to be used in computing aggregate effect sizes. Cantor et al. (2007) presented height data for pedophilic sexual offenders, teleiophilic sexual offenders, and teleiophilic nonoffenders. In our analyses, we combined the weighted mean height and the associated standard deviations for both non-pedophilic groups, resulting in a single effect size being produced by this study that represents the comparison between the pedophilic sexual offenders and these two non-pedophilic groups. For Jung et al. (2014), we extracted statistics from the two analyses that we considered the most valid method of identifying pedophilic offenders used in this study. In the presented analyses, the statistics used came from the grouping using the age of victims in the index offences and from the correlation between height and SSPI scores.

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IAN V. MCPHAIL holds a Master's degree in psychology from Carleton University in Ottawa, Ontario, and is now affiliated with the University of Saskatchewan, Saskatoon, Saskatchewan, Canada. He has published on risk factors for sexual violence in sexual offenders and has worked clinically with sexual and violent offenders.

JAMES M. CANTOR is Associate Professor of Psychiatry at the University of Toronto and Senior Scientist at the Centre for Addiction and Mental Health in Toronto, Canada. He uses behavioral, neuroimaging, and other techniques to study the development and expression of atypical sexual interests, including pedophilia. He is the current Editor-in-Chief of *Sexual Abuse: A Journal of Research and Treatment*.