

# A Correlational Investigation of the Relationship between Primary Anorgasmia, Prepubescent Sexual Experience, and Age of First Love with Prosocial Personality

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An exploratory analysis was conducted to determine if early sexual variables such as frequency of prepubertal masturbation or sex play, as well as other early variables such as age of first experience of lust or love, predict the prosocial personality traits of altruism and warmth. The data come from the first major phase of the *Multinational Life Experience and Personality Project* (MLEPP) which collected data from a national sample of more than 2000 Japanese adults aged 18 to 59. Hierarchical stepwise multiple regression was used to explore the research question, controlling for two relevant family background variables and age at time of data collection. Among Japanese women, primary anorgasmia predicated lower levels of altruism and warmth whereas earlier age of first love predicted higher levels. Among Japanese men, reporting an age of first ejaculation while simultaneously reporting never having experienced an orgasm predicted lower levels of altruism and warmth, and paralleling the analysis of the women's data, earlier age of first love predicted higher levels. Age of first experiencing lust, as well as frequency of prepubertal masturbation and sex play, did not appear to be associated with adult altruism, however, the prepubertal sexual variables did contribute to the prediction of warmth. Some tentative speculations regarding the unexpected finding related to the male data are presented.

**Key words:** MLEPP, altruism, warmth, anorgasmia, age of first love

## 1. Introduction

Sexuality, broadly construed, is an important (and often very important) aspect of human identity. Erotic- and love-based (as well as love seeking) relationships are noted by many people as having been central to their growth and development into adulthood, yet little has been scientifically established about the relationships, if any, between early sexual and related experiences and adult personality. The purpose of this article is to begin exploring the question: Are early sexual, romantic, or erotic experiences, or related developmental milestones such as age at first experience of love or lust, related to adult prosocial personality traits such as altruism and warmth?

The *Multinational Life Experience and Personality Project* (MLEPP) is a study that is collecting data from a range of nations. The first phase of the MLEPP collected data from more than 1000 U.S. men, 1000 U.S. women, 1000 Japanese women, and 1000 Japanese men. The second phase of the MLEPP is currently collecting data in three European nations and is expected to expand to additional countries around the world. The analyses presented in this paper are based on the data collected in Japan during the first phase of the MLEPP; data collection took place from April 2014 through September 2017. Data collection for the MLEPP is handled online. Recruitment for the MLEPP national samples is handled by market research firms. Quota sampling is used to ensure good coverage of adults aged 18-59 by using

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seven 6-year wide age bands (i.e., 18-23, ..., 54-59) to form quota groups separately for males and females. For more background and general information about the MLEPP, see the relevant prior publication related to the demographics of the Japanese sample<sup>1</sup>); that publication also presents the demerit system that was used to assess probable data quality of each respondent's set of responses.

The MLEPP collects data to assess various aspects of personality and mental health using items from the International Personality Item Pool<sup>2</sup>). Of relevance to the present analyses, both warmth and altruism are assessed<sup>3,4</sup>). The altruism scale used here is composed of nine items (e.g., "Love to help others") and the warmth scale is composed of ten items (e.g., "Make others feel good"); respondents are asked to indicate how accurately each statement describes them as they are now and respondents are provided with 5-point Likert-type response choices (very accurate ... very inaccurate); these scales have high internal consistency across multiple populations (i.e., Cronbach  $\alpha \geq 0.80$ )<sup>3</sup>). The questionnaire also asks respondents about the frequency of various prepubertal sexual experiences (e.g., sex play, masturbation) and the age at which particular potentially formative events occurred (e.g., age first experienced an orgasm, age first experience lust, age first experienced love).

A prior analysis with this dataset found that multiple variables were statistically significantly related to altruism and warmth: family background while growing up (i.e., prior to age 16), age at the time of data collection, and highest level of formal education completed<sup>5</sup>). These variables were all statistically related to degree of altruism and warmth both at the first order as well as in a hierarchical multiple regression. Consequently, these variables are also included in the exploratory analyses that follow.

## 2. Method

Hierarchical multiple regression was used to assess the degree to which the variables of interest were associated with adult altruism and warmth. The regressions were conducted separately for males ( $N = 1180$ ) and females ( $N = 1212$ ). Missing values were handled with pairwise deletion. Since this is an exploratory analysis,  $p < 0.10$  was used as the stepwise entry criterion and since data quality ratings (i.e., 0 to 14 "demerits") were available, the analyses were weighted for data quality; the weight for each respondent was set to 15 minus the number of demerits a respondent's data received.

In addition to asking respondents their year of birth to estimate their age at the time of data collection and the highest level of formal education they had completed (nine levels from none to a completed doctoral degree), respondents were asked various questions about their family background prior to age 16. Prior analyses<sup>5</sup>) showed that from among eight family background variables, two were very relevant for predicting adult personality and mental health; these two variables were the degree to which the parent(s)/caretaker(s) made the participant feel important, loved, and cared for (hereafter: parental-love) and parental/caretaker mental health (hereafter: parental-mental-health).

The regressions were conducted in four blocks. The first two blocks entered the control variables (two blocks were used since some readers may want to see the separate contributions). Block 1 entered the two family background control variables and block 2 entered the respondent age control variable. Block 3 used forward stepwise entry from a pool of early sexual experience variables as well as love and lust related variables (i.e., age at first experience of). A fourth block was also included to enter highest level of formal education completed (for comparison with other research).

Respondents were asked how old they were when they first experienced an orgasm (7 or younger, 8, 9, 10, ..., 19, 20 or older, not yet); this data was used to

create a dichotomous variable "anorgasmic". This researcher did not expect the anorgasmic variable to be of any relevance for the male analysis since it was expected that too few men would be anorgasmic for there to be sufficient statistical power to detect an effect even if one existed. Nevertheless, since stepwise regression was being used the variable was included in the pool of candidate variables in the analysis of the male data. Unexpectedly, anorgasmia was the first variable to enter the equation via the stepwise procedure. Post hoc examinations revealed that approximately 4% of the Japanese male sample reported "not yet" for the age of first experiencing an orgasm, however, three-quarters of these men reported an age of first experiencing ejaculation (thus only about 1% of the male sample really was reporting that they were anorgasmic). Due to this incongruous finding, the author created an additional dichotomous variable (anorgasmic-ejaculator) to flag those respondents reporting ejaculation but no experience of orgasm, and the regression was run again including this new variable together with the anorgasmia variable.

### 3. Results

#### 3.1 Absolute Level of Altruism

Japanese women scored higher than Japanese men on the altruism scale ( $t = 6.215, p < 0.001$ ), however, the absolute difference was small ( $R^2 = 1.6\%$ ). The difference between the median scores of the males and females was equivalent to answering one of the nine altruism items differently by one Likert-point.

#### 3.2 Predicting Altruism

The regression on the Japanese male data showed that family background variables (i.e., parental-mental-health and parental-love) contributed to altruism (adjusted  $R^2 = 4.8\%$ ). Addition of respondent age contributed an additional 0.5% to the adjusted  $R^2$  for the model.

The stepwise procedure selected two sexual/love/lust variables. The first to enter was anorgasmic-

ejaculator, which contributed an additional 1.5% to the adjusted  $R^2$ . Whereas higher parental mental health, higher parental love, and older age at the time of data collection were all positively associated with altruism, reporting that one ejaculated but had not yet experienced an orgasm was associated with lower altruism. The second variable to enter was age-of-1st-love, contributing an additional 0.3% to the adjusted  $R^2$ , with younger age of first love being associated with higher altruism. Anorgasmia, age of first lust, frequency of prepubertal masturbation, and frequency of prepubertal sex play did not enter the model.

The final block entered the educational level of the respondents, raising the adjusted  $R^2$  by an additional 0.3% with higher levels of education being associated with higher levels of altruism.

The final regression model was highly statistically significant,  $f(6, 1144) = 16.25, p < 0.001$ . The adjusted  $R^2$  for the final regression model based on the male data was 7.4%

Consistent with the regression on the male data, the regression on the Japanese female data similarly showed that parental-mental-health and parental-love had an adjusted  $R^2$  of 4.8% in predicting altruism. Age at time of data collection was more relevant for females, contributing an additional 1.1%.

Paralleling the analysis of the male data, anorgasmia was the first sexual/love/lust variable to enter via the stepwise procedure, contributing 2.3% to the adjusted  $R^2$  with anorgasmia being associated with lower levels of altruism. Again paralleling the analysis of the male data, the only additional sexual/love/lust variable to enter the model was age-of-1st-love, contributing an additional 0.8% to the adjusted  $R^2$ , with younger age of first love being associated with higher altruism.

The final block of the regression entered respondent educational level raising the adjusted  $R^2$  by an additional 0.9%, with higher levels of education being associated with higher levels of altruism.

The final regression model was highly statistically significant,  $f(6, 1135) = 21.95, p < 0.001$ . The adjusted  $R^2$  for the final regression model based on the female data was 9.9%.

### 3.3 Absolute Level of Warmth

As with the altruism scale, Japanese women scored higher than Japanese men on the warmth scale ( $t = 6.945, p < 0.001$ ); again, the absolute difference was small ( $R^2 = 2.0\%$ ). The difference between the median scores of the males and females was equivalent to answering two of the ten warmth items differently by one Likert-point each.

### 3.4 Predicting Warmth

The regression on the Japanese male data showed that the family background variables contributed to warmth (adjusted  $R^2 = 5.8\%$ ). Addition of respondent age contributed an additional 0.4% to the adjusted  $R^2$  for the model.

The stepwise procedure selected three sexual/love/lust variables. The first to enter was anorgasmic-ejaculator, which contributed an additional 1.9% to the adjusted  $R^2$ ; reporting that one ejaculated but had not yet experienced an orgasm was associated with lower warmth. The second variable to enter was age-of-1st-love, contributing an additional 0.8% to the adjusted  $R^2$ , with younger age of first love being associated with higher warmth. Frequency of prepubertal sex play contributed an additional 0.3% to the adjusted  $R^2$  with higher frequency of sex play being associated with higher levels of warmth. Anorgasmia, age of first lust, and frequency of prepubertal masturbation did not enter the model.

The final block entered the educational level of the respondents raising the adjusted  $R^2$  by an additional 0.4%, with higher levels of education being associated with higher levels of warmth.

The final regression model was highly statistically significant,  $f(7, 1143) = 18.53, p < 0.001$ . The adjusted

$R^2$  for the final regression model based on the male data was 9.6%

The regression on the Japanese female data showed that parental-mental-health and parental-love had an adjusted  $R^2$  of 6.2% in predicting warmth. Age at time of data collection only contributed an additional 0.2%.

Paralleling the analysis of the male data, anorgasmia was the first sexual/love/lust variable to enter via the stepwise procedure, contributing 2.8% to the adjusted  $R^2$  with anorgasmia being associated with lower levels of warmth. Again paralleling the male data, age-of-1st-love was the second variable to enter, contributing an additional 1.7% to the adjusted  $R^2$ , with younger age of first love being associated with higher warmth. Whereas the prepubertal sex play variable entered the model in the analysis of the male data, in the regression on the female data the frequency of prepubertal masturbation entered the equation, contributing an additional 0.1% to the adjusted  $R^2$  with higher frequency of prepubertal masturbation being associated with higher levels of warmth. Anorgasmia, age of first lust, and frequency of prepubertal sex play did not enter the model.

The final block of the regression entered respondent educational level, raising the adjusted  $R^2$  by an additional 1.5%, with higher levels of education being associated with higher levels of warmth.

The final regression model was highly statistically significant,  $f(7, 1134) = 24.32, p < 0.001$ . The adjusted  $R^2$  for the final regression model based on the female data was 12.5%.

### 3.5 Overview and Change in Significance

The progress of the four regressions presented above also appears in Tables 1 and 2. The tables additionally provide the significance values (i.e.,  $p$ -values) for the variables in the final model, allowing inspection of how significance changed with the entry of additional variables. The most extreme change occurred for the regression on warmth with the Japanese women's data; although age at time of data collection entered the

Table 1. Tabular presentation of the progress of the hierarchical stepwise regressions for Japanese men and final significance values.

	Altruism		Warmth	
	Contribution to Adjusted $R^2$	Final Model $p$ -value	Contribution to Adjusted $R^2$	Final Model $p$ -value
Block #1: family background	4.8%	< 0.001	5.8%	< 0.001
Block #2: age at time of data collection	0.5%	< 0.03	0.4%	< 0.08
Block #3: anorgasmia	did not enter	n/a	did not enter	n/a
Block #3 Step #1: anorgasmic ejaculator	1.5%	< 0.001	1.9%	< 0.001
Block #3 Step #2: age of 1 <sup>st</sup> love	0.3%	< 0.08	0.8%	< 0.003
Block #3: prepubertal masturbation	did not enter	n/a	did not enter	n/a
Block #3 Step #3: prepubertal sex play	did not enter	n/a	0.3%	< 0.03
Block #3: age of 1 <sup>st</sup> experiencing lust	did not enter	n/a	did not enter	n/a
Block #4: educational attainment	0.3%	< 0.03	0.4%	< 0.01

Table 2. Tabular presentation of the progress of the hierarchical stepwise regressions for Japanese women and final significance values.

	Altruism		Warmth	
	Contribution to Adjusted $R^2$	Final Model $p$ -value	Contribution to Adjusted $R^2$	Final Model $p$ -value
Block #1: family background	4.8%	< 0.04	6.2%	< 0.05
Block #2: age at time of data collection	1.1%	< 0.01	0.2%	< 0.50
Block #3 Step #1: anorgasmia	2.3%	< 0.001	2.8%	< 0.001
Block #3: anorgasmic ejaculator	n/a	n/a	n/a	n/a
Block #3 Step #2: age of 1 <sup>st</sup> love	0.8%	< 0.003	1.7%	< 0.001
Block #3 Step #3: prepubertal masturbation	did not enter	n/a	0.1%	< 0.08
Block #3: prepubertal sex play	did not enter	n/a	did not enter	n/a
Block #3: age of 1 <sup>st</sup> experiencing lust	did not enter	n/a	did not enter	n/a
Block #4: educational attainment	0.9%	< 0.001	1.5%	< 0.001

Notes: Contribution to Adjusted  $R^2$  represents the incremental increase in predictive ability of the model up to that point in the regression (i.e., not the contribution in the final model); Final Model  $p$ -value represents the statistical significance of the relevant variable in the final model (i.e., not the significance at time of entry into the model).

regression at the exploratory entry level ( $p < 0.10$ ), the variable was of no significance in the final model ( $p > 0.4$ ). For the men, the variables of highest significance in the final model for both altruism and warmth were the family background variables and being an anorgasmic-ejaculator. For the women, although the family background variables continued to be significant, their contribution was notably less than at the point of entry; anorgasmia and educational attainment were of greater significance in the final model (closely followed by age of 1<sup>st</sup> love).

#### 4. Discussion

Japanese women scored somewhat higher than Japanese men on both the altruism and warmth scales. Given that the scales are each composed of 9 or 10 items, with 5-point Likert-type response choices, and the difference between the median scores was equivalent to a one point difference on just one item in the case of altruism and a two point difference in the case of warmth, the difference does not appear to be of practical import.

As expected and previously reported<sup>5)</sup>, from among the variables examined in this research family background variables appear to be the most salient indicators of adult altruism and warmth, and are likely to be the most important causal variables for developing prosocial adults. Growing up in a loving and stable home not only leads to better mental health, but it also leads to prosocial personality traits such as warmth and altruism.

Among the sexuality variables examined here, for women, primary anorgasmia was found to be the most predicative sexual variable, with anorgasmia being associated with lower degrees of altruism and warmth. It is not clear why this is the case, though many theories could be advanced.

It is interesting that whereas higher frequency of prepubertal masturbation (a solitary activity) positively predicted prosocial personality for women, higher frequency of prepubertal sex play (a social activity) did not, with the reverse being the case for men. It should be

noted, however, that the predictive ability of these variables was quite small, and that there may have been limited statistical power; future research may wish to further examine these variables in populations with higher levels of prepubertal sexual experience to determine if this is a true sex difference between males and females.

The most interesting finding comes from the male analyses wherein the most predictive sexual variable was reporting that one had never had an orgasm but that one had experienced ejaculation. Since ejaculation implies orgasm, this finding raises many questions as to what these respondents (approximately 3% of the male sample) are thinking and believing. This author does not have a clear explanation for the finding, however, another researcher has suggested that a large proportion of heterosexually-oriented Japanese pornography focuses on the woman having an "orgasm" (オーガズム) whereas this term is less frequently used in describing men's experience of sexual climax, with men's experiences being more often referred to as "cumming" (いゝく). Thus it seems possible that some men associate the word *orgasm* with a female experience (and thus report not having had the experience) leading to the unexpected response pattern. It may also be that some men view the term orgasm as referring to a *very powerful* sexual climax (e.g., as might be acted out in a pornographic film but be less common in real life), and are merely indicating that they have not experienced a subjectively powerful sexual climax (i.e., orgasm). In any case, regardless of the reason for these responses it is not clear why this subgroup of men would be statistically significantly associated with lower levels of prosocial personality traits, contributing an additional 1.5% to the prediction of altruism and 1.9% to the prediction of warmth. Perhaps these men truly do have lower levels of enjoyment from sexual climax, and this in turn affects their level of happiness in life, thus affecting their prosocial personality traits; clearly further detail than provided

here will be needed to form a clear and credible hypothesis.

The only other sexual variable that entered the equations, and did so both in the male and the female analyses, was the age of first experiencing love. Experiencing love at an earlier age is associated with higher adult altruism and warmth. The present study cannot determine a causal direction for these findings, however, it is possible that inherently prosocial children naturally experience love earlier than others (that is, their altruism and warmth causes earlier first love), or it could be that the experience of first love itself causally develops warmth and altruism by leading people to think about and want to develop the welfare of others. Future longitudinal research that initially collects data from children may be needed to fully elucidate this finding.

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