

Demographics, Personality Traits & Satisfaction amongst altruistic surrogates who carry for strangers

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This study describes demographic and surrogacy-related characteristics, personality traits & satisfaction levels amongst thirty surrogates who carried for previously unknown intended parents in Australia or New Zealand.

Surrogates commonly carried for heterosexual (63%) and gay (43%) singles or couples. Over a quarter had used their own eggs. A significant proportion (40%) were located in regional or remote locations. Many (44%) had engaged in more than one arrangement. Nearly three in ten (29%) arrangements were rated as negative experiences. A significant proportion (20%) carried as single women or for intended parents at a distance, yet there was no correlation with higher journey dis-satisfaction amongst these groups. NEO-PI3 personality profiles demonstrated a wide mix of personality types. Altruism scores were the same as population norms.

The results suggest that surrogates who carry for previously unknown parties are a vulnerable group who may require significantly more support from professionals and intended parents.

Domestic surrogacy arrangements between previously unknown parties have seen a dramatic rise in Australasia; however little is understood about the types of agreements or surrogate demographics and satisfaction levels with the arrangement.

Results showed such surrogates are no more altruistic than the general population, are commonly in regional locations, sometimes single, and often carrying for intended parents at a distance. For many, the experience does not meet expectations. Despite this, it was common to carry for multiple recipients.

The results suggest that Australasian altruistic surrogates who carry for previously unknown parties are a vulnerable group who may require significantly more support from professionals and intended parents.

Background

Annual births via altruistic gestational surrogacy in the Australian context have seen a five-fold increase in the last eight years (Newman et al. 2020; Macaldowie et al. 2012). Yet, there remains a dearth of studies on the demographics,

satisfaction, and personality profiles of Australasian surrogates and a particular absence of data on surrogates who carried for recipients who they had not previously known.

No psychological screening or post-approval healthcare professional oversight of Australian surrogacy arrangements is provided. Research in this sector has previously raised concerns that surrogates may be inadequately emotionally prepared for the surrogacy process (Purewal et al., 2012). Some regret their decision to become a surrogate. Dissatisfaction may increase as contact with intended parents diminishes post-birth.

In the altruistic surrogacy context, research in the U.K. and Israel has shown that non-monetary expectations compensate for the lack of financial reward. Such surrogates are prepared to give up family and personal time in exchange for a new and lasting friendship. They want to be part of a trusted kinship network, involving a genuine relationship, based on mutual trust and appreciation (Teman, 2010; Campbell, 2012). They believe that their intended parents will be equally helpful in return. If this does not occur, dis-satisfaction may be more likely.

A European study found that 70 per cent of surrogates had a desire to be repeat surrogates because of their satisfactory experience (Lorenceanu et al., 2015). A UK study of 34 surrogates found six per cent were dissatisfied with the experience (Javda et al. 2003). In Canada, in an analysis of 266 current and past arrangements involving Canadian surrogates carrying for previously unknown intended parents, most (78%) had the support of a surrogacy agency. In 12% of arrangements, surrogates rated their satisfaction as neutral or relatively low (Yee

et al., 2019). However, Yee & colleagues found dis-satisfaction to be correlated with surrogates carrying for foreign intended parents. Hence a hypothesis we considered was whether there was a correlation between surrogates carrying at a distance from their intended parents and subsequent satisfaction with the arrangement.

Professionally managed surrogacy programs in the U.S. typically use psychological screening instruments in addition to clinical interviews to assess suitability (Lorenceanu et al., 2015; Fuchs, & Berenson 2016). Australia utilizes such tools only to screen for psychopathology. In the U.S. context, the Minnesota Multiphasic Personality Inventory (MMPI) is widespread. Braverman & Corson's 1992 study showed surrogates tended to be the dominant partner in the relationship, were motivated by a wish to help, enjoyed being pregnant, showed narcissistic needs, and expressed a desire for secondary financial gain (Braverman & Corson 1992).

A study of 43 prospective U.S. surrogates administered the MMPI-2 concluded that this population made an effort to appear free of misgivings or undesirable features and tried to portray themselves in a positive light. The same study showed surrogates to be more outspoken than average females, with higher self-esteem and lower levels of anxiety and depression. They scored significantly higher on ego strength, social obligation and duties, and contained hostility, relative to the normative group (Pizitz et al. 2013).

Research with European surrogates utilized the Interpersonal Reactivity Index (empathy index), the Hospital Anxiety and Depressions Scale, and the MC20, a social desirability scale. It showed surrogates to be less anxious and depressed than normative samples while their empathy indexes were similar to normative samples, sometimes higher (Lorenceanu et al., 2015).

Some studies have reported instead on surrogate traits using the Personality Assessment Inventory (PAI). A retrospective review of Australian surrogates who were nearly all (95%) relatives or friends of their intended parents showed most had PAI scores in the normal ranges, indicating they were psychologically healthy and well-functioning (Montrone et al., 2020).

While the PAI is the default psychopathology screening tool amongst Australian surrogates, it is possible that the NEO-PI3 may be more appropriate because it is not only shorter but more focussed on personality style and functioning in normal populations.

The NEO Personality Inventory-3 is the third iteration of a personality inventory first used in 1978 with adult men and women without overt psychopathology (McCrae et al 2005). It measures five key factors: neuroticism, extraversion; openness; agreeableness and conscientiousness. In addition, it gives insights into the six facets which define each domain. It has 240 items answered on a five-point Likert scale. A study of U.S. surrogates using the NEO PI-R showed significantly higher scores on extraversion, excitement-seeking and positive emotions, fantasy, and altruism and markedly lower on conscientiousness, order, dutifulness, and achievement striving (Kleinpeter & Hohman, 2000).

Aims & Objectives

Amongst surrogates who carried for previously

unknown commissioning parents in Australia or New Zealand, this study aimed to describe demographic and surrogacy-related characteristics as well as personality traits & satisfaction with the relationship. The study was also designed to provide benchmark data on NEO-PI3 personality attributes amongst surrogates versus population norms and to assess the utility of this instrument in the Australian surrogacy context.

Research Design

Ethics approval was granted by the University of Wollongong. Participants needed to have agreed to carry for an intended parent(s) who were not previously known to them; entered into a surrogacy agreement and birthed a child sometime in the past seven years; to be resident in Australia or New Zealand when they carried; and be aged over 18 years.

Subjects were recruited through a mix of email and social media invitations to Australian and New Zealand surrogates, through co-operation with non-profit and community organizations as well as peer support social media groups. Community organizations promoted the research via social media advertising and by emailing a one-page information letter to all surrogates on their databases.

To reduce a potential source of sampling bias, the methodology also tapped into offline recruitment of surrogates. A possible bias was the exclusion of surrogates who had engaged in an arrangement with intended parents but were not successful.

The inclusion of both gestational and traditional surrogates in the selection criteria was not considered to be a significant confounder, given past research has shown that there are no significant differences in outcomes for these two types of surrogates (Imrie & Jadvá 2014).

Recruitment and fieldwork took place with 30 surrogates in August and September 2018 via computer-based video interviews of 40 -70 minutes duration. Considering an average of 48 Australian or New Zealand surrogates gave birth via gestational surrogacy each year over the 2012-2018 period, and the majority of these are for family members or friends, the sample size of n=30 provided a robust representation of the total number who carried for previously unknown intended parents (Newman et al. 2020; Macaldowie et al. 2012).

The outcome of each research participant's completed surrogacy arrangement(s) was coded as 'positive' or 'negative' based on whether they had experienced significant conflict in their relationship with the intended parent(s); whether they felt positive or negative about the experience and whether they maintained a positive relationship with their intended parents.

As well as a depth interview, participants were invited to complete the NEO-PI3 online in their own time. Those who only partially completed or did not complete it were excluded from this part of the analysis. We used algorithms already developed to interpret test results. Subjects were provided with a quantitative summary of their scores where requested.

Quantitative variables were coded and reported as means or percentages of the total sample. Comparison of mean scores between populations used p values at the 0.05 significance level. Between-group correlations with satisfaction used the Chi-squared statistic with the Yates correction for continuity and a one-sided t-test.

Results

Participant Characteristics

Of those thirty surrogates who took part in qualitative interviews, their mean age at the time of the interview was 36.6 years. The majority of recruited participants lived in NSW (n=9), Victoria (n=8), or Queensland (n=7). Surrogates in Tasmania and ACT were also represented. Three participants were residents in New Zealand. A significant proportion (20%) carried as a single woman, without the support of a partner. While the majority resided in metropolitan settings (60%), a significant proportion were in regional (37%) or remote (3%) locations. On average, participants had delivered their most recent infant via surrogacy 20 months prior to the interview (range 0 -80 months).

Table One summarises participant characteristics

Table One: Surrogate Sample Characteristics

Age at Interview	
28 – 32 years	23%
33 – 37 years	27%
38 – 42 years	43%
43 - 45 years	7%
Mean age	36.6
Relationship Status	
Partnered	80%
Single	20%
Type of Arrangements	
Gestational Surrogacy	73%
Traditional surrogacy	7%
Gestational & traditional	20%
Carried for	
Heterosexual recipients	63%
Gay recipients	43%
Location	
Metropolitan	60%
Regional	37%
Remote	3%
Distance from Recipients¹	
<2 hours (local)	43%
>3 hours (long distance)	57%
Previously an egg donor	37%
The overall experience of the first surrogacy journey	
Poor	27%
Good	73%

Twenty of the total sample chose to complete the online NEO-PI instrument. Reasons for non-completion were not gathered, but this was an optional component.

Surrogacy Experience

A sizable proportion (37%) had come to surrogacy after being an egg donor. Fifty-six per cent (17/30) had commenced just one surrogacy arrangement, eight had commenced two arrangements, four had the experience of three arrangements, and one had engaged in six surrogacy journeys.

Over a quarter had engaged in traditional surrogacy, and a minority (7%) had the experience of both traditional and gestational surrogacy. Participants were more likely to have carried for heterosexual intended parents (63%), although nearly half (43%) had carried for a gay single or couple. Participants were more likely to have engaged with intended parents over three hours of travel away (57%).

Of 41 arrangements rated, 69% were rated as a positive experience. However, 29% (n=12) of arrangements were rated as distinctly negative experiences associated with significant trauma, stress, and negative emotions. There was no significant correlation between satisfaction with the surrogacy arrangement and carrying for intended parents at a distance ($X^2 = 1.73, p=0.05$).

Personality Data

As shown in Table Two, of the 20 surrogates who completed the NEO-PI3 instrument, the only key personality factor on which they scored significantly higher than the population average was on the facet 'values' ($\mu=61.5, p=0.03$).

Table Two: Mean Scores on Five Key Factors & Individual Facets

	Means	SD	Z
Neuroticism	46.95	9.7	-0.31
Anxiety	42.60	8.2	-0.90
Angry Hostility	47.65	7.9	-0.30
Depression	47.20	10.4	-0.27
Self-consciousness	50.45	9.6	0.05
Impulsiveness	48.15	8.4	-0.22
Vulnerability	44.55	9.5	-0.57
Extraversion	50.60	11.2	0.05
Warmth	50.40	9.0	0.04
Gregariousness	45.10	11.5	-0.43
Assertiveness	52.80	11.9	0.23
Activity	51.20	10.6	0.11
Excitement Seeking	52.80	12.2	0.23
Positive Emotions	54.35	9.6	0.45
Openness	55.95	10.5	0.57
Fantasy	51.05	10.3	0.10
Aesthetics	49.45	11.4	-0.05
Feelings	53.30	9.2	0.36
Actions	53.00	12.0	0.25
Ideas	55.10	12.1	0.42
Values ²	61.50	6.2	1.85
Agreeableness	52.00	7.3	0.27
Trust	53.50	7.4	0.47
Straightforwardness	53.20	9.5	0.34
Altruism	52.90	8.1	0.36
Compliance	47.45	7.8	-0.33
Modesty	56.90	7.9	0.87
Tender-mindedness	55.80	9.1	0.64
Conscientiousness	51.50	8.9	0.17
Competence	54.30	8.7	0.50

Order	49.05	8.3	-0.11
Dutifulness	51.50	7.7	0.19
Achievement Striving	56.45	8.0	0.81
Self-Discipline	50.95	8.6	0.11
Deliberation	49.10	11.0	-0.08

Plotting openness vs agreeableness showed almost half (n=9) could be classified as progressives. In regard to the style of character, our sample was more often well-intentioned (n=8) – defined as giving, sympathetic, and genuinely concerned about others. Just 15% (3/20) had character styles placing them in the ‘effective altruist’ quadrant.

In regard to the style of interests, our sample was more often Creative Interactors (n=9). Looking at the style of defence, surrogates could most often be classified as hypersensitive (n=7) or adaptive (n=7). There was no correlation between hypersensitivity and journey dis-satisfaction, but most surrogates who had adaptive personalities (87%) were satisfied with their surrogacy arrangement.

Concerning anger control, surrogates were more often classified as timid (n=6) or easygoing (n=7). These personality types were not correlated with differences in satisfaction with their surrogacy arrangement.

Discussion

The mean age of surrogates in our study (37 years) was very similar to that reported by Montrone et al. (2020) and suggests that Australian and New Zealand women do not come to surrogacy until after completing their own families. Recent studies of surrogates in the U.S. and Canada have shown significantly lower mean ages (Fuchs & Berenson, 2016; Pizitz et al., 2013; Van den Akker, 2003) though in the U.K. altruistic context, mean ages at which surrogates carry a child are similar to Australia (Javda et al. 2003; Pizitz et al., 2013).

A significant proportion of surrogates carried as single women and for intended parents at a distance, yet there was no correlation with higher dis-satisfaction for these groups, suggesting that single surrogates and those at a distance can have the appropriate support networks to support their journeys. A recent review of Canadian surrogates showed a similar proportion were single, separated, or divorced (Yee et al. 2019).

The NEO-3 personality profiles of altruistic surrogates in our study demonstrated a broad mix of personality types. Interestingly, mean scores on altruism were the same as population norms. However, a differentiating feature of Australian and New Zealand surrogates who carry for strangers is the importance they place on values. Such women are prepared to re-examine their social, political, and religious values, to accept others’ beliefs, ideas, and behaviours.

For many, there was a sizable delay between their surrogacy arrangement, concluding and taking part in the research. Subjective measures of satisfaction with the relationship amongst surrogates are likely to have been tempered with time.

Although the U.S. surrogate NEO-PI3 scores were measured before their surrogacy arrangement, such scores tend to be stable over time. Hence comparing these two population’s scores is appropriate. The pattern of Australasian NEO-3 profiles was very different from those of U.S. compensated surrogates (Kleinpeter & Hohman, 2000) who were significantly more likely

to be day-dreamers, altruists, excitement-seeking, joyful and high-spirited. None of these traits was reflected in our sample. It is likely that the ability to advertise for and financially compensate U.S. surrogates attracts an entirely different type of woman than seen in the altruistic context.

A ‘progressive’ personality type was common. Such women have a thoughtful approach to social problems, are willing to try new solutions, have faith in human nature, and are confident society can be improved through education, innovation, and co-operation. Altruistic surrogates were also often Creative Interactors - women whose interests revolve around the new and different, who like to share their discoveries with others. Such personality types enjoy public speaking and teaching, fit in well to discussion groups and enjoy meeting people from different backgrounds. The high proportion of Creative Interactors may in part be a product of sampling bias by relying mainly (though not exclusively) on recruitment of surrogates who maintained an active online profile.

Altruistic surrogates tended to be either hypersensitive or adaptive. Those with hypersensitive personalities vividly imagine possible misfortune and sometimes have odd and eccentric ideas. In the independent surrogacy setting, this personality type may lead to increased stress for both surrogates and intended parents. Adaptive types are keenly aware of conflict, stress or threat, but use these situations to stimulate creative adaptations. Such a personality type is likely to be protective in the surrogacy context.

We saw a split between Timid and easy-going surrogates. Timid individuals are heavily conflicted over anger. Yet, they are reluctant to express anger because they do not want to offend others. Agreeable individuals are slow to anger and also unwilling to show anger if it does arise. They would prefer to forgive and forget and try to work toward common ground in resolving disputes. The disinclination to express anger may be a positive aspect of their involvement in intimate surrogacy relationships.

A limiting factor in interpreting personality type trends was the smaller sample size which limited the power of the study.

The high proportion of repeat altruistic surrogates in our sample is of considerable interest. Yee and colleagues’ (2019) survey of Canadian surrogates found that an even higher proportion had engaged in multiple arrangements (78%).

Despite over a quarter of Canadian surrogates reporting a weak or absent connection to their intended parents, their dissatisfaction was less than half that reported in our study. However, over a quarter of Canadian surrogates consciously chose to carry for foreign singles or couples, which suggests a lower expectation of an ongoing friendship.

The lack of professional support in the Australasian environment may lead surrogates who are outside kinship networks to depend more on relationships with their intended parents. Higher dissatisfaction may be related to intended parents being unable or unwilling to invest in the close relationship sought by the surrogate.

Our study provides insight into the range of demographic and personality types who engage as altruistic surrogates for strangers and the kinds of intended parents they carry for. It may be generalizable to other environments where surrogates can match and work independently with intended parents, such as the UK, Canada, and the USA.

Given this study failed to demonstrate any correlation between surrogate dis-satisfaction and surrogate personality or

circumstantial factors, further quantitative research should be conducted to examine possible reasons for dissatisfaction. Only with such insights can altruistic surrogate expectations be better managed and protected.

Bio

Sam Everingham BSc, MA, MPH has twenty five years experience as a social & healthcare research professional. He is on the board of the charity Surrogacy Australia and has co-authored prior research studies on Australian attitudes to surrogacy, as well as Australians use of domestic and cross border arrangements. His research has been published in the Medical Journal of Australia, The ANZ Journal of Obstetrics and Gynaecology, Reproductive Biomedicine Online & the Australian Institute of Family Studies

Katrina Hale is a Sydney-based ANZICA-registered Psychologist and Infertility Counsellor with over 20 years counselling experience. She is passionate about supporting altruistic surrogacy arrangements and works closely in screening and supporting all parties. She has supporting dozens of Australian surrogates as well as gay and heterosexual intended parents prior to and during surrogacy arrangements.

Footnotes

¹Based on their first arrangement if they had carried more than once

²P<0.05 (one-sided)

References

Braverman, A.M. & Corson, S.L. (1992). Characteristics of Participants in a Gestational Carrier Program, *Journal of Assisted Reproduction & Genetics*, 9(4), 353-357. <https://doi.org/10.1007/BF01203959>

Campbell, A. (2012). Law's Suppositions About Surrogacy Against the Backdrop of Social Science. *Ottawa L Rev* 43(1) 29. CanLII Docs 81, <https://canlii.ca/t/28d0>

Fuchs, E.L. & Berenson, A.B. (2016) Screening of gestational carriers in the United States. *Fertility and Sterility* 106(6) 1496–1502. <https://doi.org/10.1016/j.fertnstert.2016.07.1111>

Imrie, S. & Jadva, V. (2014) The long-term experiences of surrogates: relationships and contact with surrogacy families in genetic and gestational surrogacy arrangements. *Reproductive BioMedicine Online*, 29(4), 424-435. <https://doi.org/10.1016/j.rbmo.2014.06.004>

Javda, V., Murray, C., Lycett, E., MacCallum, F. & Golombok, S. (2003) Surrogacy; the experiences of surrogate mothers, *Human Reproduction*, 18(10) 2196-2204. <https://doi.org/10.1093/humrep/deg397>

Kleinpeter, C.H., & Hohman, M.M. (2000) Surrogate motherhood: personality traits and satisfaction with service providers. *Psychological Reports* 87(3) 957-970 <https://doi.org/10.2466/pr0.2000.87.3.957>

Lorenceau, E.S. Mazzucca, L., Tisseron, S., & Pizitz, T.D. (2015) A cross-cultural study on surrogate mother's empathy and

maternal–foetal attachment. *Women Birth*, 28, 154-159 <http://dx.doi.org/10.1016/j.wombi.2014.11.006>

Macaldowie, A., Wang, Y.A., Chambers, G.M. & Sullivan, E.A. (2012) Assisted reproductive technology in Australia and New Zealand 2010. Assisted reproduction technology series no. 16. Cat. no. PER 55. Canberra: AIHW. <https://npsu.unsw.edu.au/surveillance/assisted-reproductive-technology-australia-new-zealand-2010>

McCrae, R.R., Costa, P.T. & Martin, T.A. (2005). The NEO–P.I. –3: A More Readable Revised NEO Personality Inventory, *Journal of Personality Assessment*. 84(3), 261–270. https://doi.org/10.1207/s15327752jpa8403_05

Montrone, M., Sherman, K.A., Avery, J., Rodino, I.S. (2020) A comparison of sociodemographic and psychological characteristics among intended parents, surrogates, and partners involved in Australian altruistic surrogacy arrangements. *Fertility and Sterility*, 113(3), 642-652 <https://doi.org/10.1016/j.fertnstert.2019.10.035>

Newman, J.E., Fitzgerald, O., Paul, R.C., Chambers, G.M. (2020). Assisted reproductive technology in Australia and New Zealand 2018. Sydney: NPESU University of New South Wales Sydney. <https://npsu.unsw.edu.au/surveillance/assisted-reproductive-technology-australia-and-new-zealand-2018>

Purewal, S., Crawshaw, M. & van den Akker O. (2012) Completing the surrogate motherhood process: Parental order reporters' attitudes towards surrogacy arrangements, role ambiguity and role conflict. *Human Fertility* 15(2), 94–99.

Pizitz, T.D., McCullaugh, J., Rabin, A. (2013) Do women who choose to become surrogate mothers have different psychological profiles compared to a normative female sample? *Women Birth*; 26(1) 15–20. <https://doi.org/10.1016/j.wombi.2012.06.003>

Teman, E. (2010) Birthing a mother: The surrogate body and the pregnant self. London: University of California Press.

Van den Akker, O. (2003) Genetic and gestational surrogate mothers' experience of surrogacy. *Journal of Reproductive and Infant Psychology*, 21(2) 145–161. <https://doi.org/10.1080/0264683031000124091>

Yee, S., Goodman, C.V. & Librarch, C.L. (2019) Determinants of gestational surrogates' satisfaction in relation to the characteristics of surrogacy cases. *Reproductive Biomedicine Online*, 39 (2) 249-261. <https://doi.org/10.1016/j.rbmo.2019.04.001>

Yee, S. & Librarch, C.L. (2019) Analysis of gestational surrogates' birthing experiences and relationships with intended parents during pregnancy and post-birth. *Birth*. 46 628–637. <https://doi.org/10.1111/birt.12450>