Understanding the Importance of Fatherhood among Men Living with HIV in Ontario

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Abstract

While pregnancy and motherhood have become paramount clinical issues for women living with HIV, parenting has received less attention among men living with HIV (MLWH). We conducted a secondary analysis of a cross-sectional study assessing fertility desires and intentions of MLWH using a 5-point Likert scale based on the question: “Being a father is important to me”. Logistic regression models were fit to calculate unadjusted and adjusted odds ratios (ORs) and confidence intervals (CIs) for significant correlates. Of the 276 respondents, 118 were heterosexual, 158 were gay, bisexual, 2-spirit, or queer (GBTQ), 55% had never parented before, and 65% wanted to parent. 191 (69%) respondents agreed that fatherhood was important to them. In unadjusted analyses, heterosexuality (OR 1.52; 95% CI 1.15 to 2.03), African/Caribbean/Black ethnicity (OR 1.57; 95% CI 1.12 to 2.19), African/Caribbean birthplace (OR 1.48; 95% CI 1.06 to 2.05), and history of parenting (OR 1.60; 95% CI 1.10 to 2.39) were significantly (p < 0.05) associated with importance of fatherhood. However, none of these variables were significant in adjusted analyses. From the unadjusted model, factors such as sexual orientation, ethnicity, and current parenthood may influence how MLWH value fatherhood, suggesting HIV and fatherhood is complex and must be explored further.

Keywords

community-based research, fatherhood, men

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Introduction

It is undeniable that the dominant narrative on reproductive health issues—including parenthood in the context of HIV and reproductive rights and decision-making—has prioritized women. In fact, as early as 1984, literature emerged reporting on the clinical manifestations of acquired immune deficiency syndrome (AIDS) in pregnancy. What quickly followed throughout the 1990s was an increased focus on contraception, pregnancy, breastfeeding, and parenting for women living with HIV (WLWH) in low-, middle-, and high-income countries. More recently, focus has shifted away from solely biomedical concerns of pregnancy and motherhood towards incorporating psychosocial and cultural issues affecting WLWH. Factors like the ability to access contraception, reduce vertical transmission, and prenatial HIV testing have been highlighted

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Supplementary Questions

What Do We Already Know about This Topic?
The importance that women living with HIV place on motherhood is already well known, while it is understood that experiences of fatherhood can help normalize and give meaning to life for men living with HIV (MLWH).

How Does Your Research Contribute to The Field?
This research contributes to the field by highlighting the importance MLWH place on fatherhood, which may correlate with demographic factors like sexual orientation, race, and history of parenting.

What Are Your Research’s Implications Toward Theory, Practice, or Policy?
The results of this study have implications for practice which suggest that clinicians and service providers should explore parenting desires in greater depth with MLWH.

Methods

Design, Population, and Survey Instrument
We performed a secondary analysis of a cross-sectional study assessing the fertility desires and intentions of MLWH from across Ontario, Canada. Participation in the study involved a single peer interviewer-administered survey. Peer interviewers...
were men and women living with HIV who had extensive experience in community-based research. The survey instrument was based on questions from an analogous survey investigating the fertility desires and intentions of WLWH\(^3\) and another survey assessing the reproductive views of MLWH in London, England.\(^{10}\) The survey development process, details of the survey contents, and the validation process have been reported elsewhere.\(^{19,21}\)

Efforts were made to stratify participant enrolment to align regional distribution. To best match the sexual, ethnic, and geographical distribution of MLWH in Ontario, non-random, purposive sampling was used in participant recruitment. Participants were chosen based on the following inclusion criteria: (1) living with HIV; (2) 18 years of age or older; (3) identifying as male; (4) living in Ontario, Canada.

**Ethical Approval and Informed Consent**

Primary research ethics approval was received from the University of Toronto's Research Ethics Board (Reference # 33174). All participants provided written, informed consent indicating their agreement to complete the peer administered survey.

**Statistical Analysis**

The importance of fatherhood for MLWH was the primary outcome of interest, based on the question: “Being a father is important to me”. Participants answered this question on a 5-point Likert scale ranging from “Strongly agree” to “Strongly disagree”. For the current analyses, the variable was dichotomized with men who answered “Strongly agree” or “Agree” considered to value the importance of fatherhood, whereas those who answered “Neither agree nor disagree”, “Disagree”, or “Strongly disagree” were considered to feel that fatherhood was not important to them. In this work, the term “fatherhood” was not specifically defined, and instead left up to the interpretation of participants.

All statistical analyses were completed using SAS Version 9.4 (SAS Institute, Cary, North Carolina, USA). Sample characteristics were summarized using median and inter-quartile range (IQR) for continuous variables and frequencies/percentages for categorical variables. Bivariant and multivariable logistic regression models were used to identify significant correlates of the importance of fatherhood. Sexual orientation, ethnicity, and history of parenting were a priori variables of interest. Other variables assessed included age, region in Ontario, birthplace, religion, education, employment status, income, relationship status, and HIV factors (e.g., years since HIV diagnosis, antiretroviral treatment, CD4 count, viral load, contraceptive use, coinfections). Associations were expressed as unadjusted and adjusted odds ratios (ORs) with 95% confidence intervals (CIs).

Variables with \(p < 0.20\) in the bivariant analyses were candidates for inclusion in the final multivariable logistic regression model. In some cases, collinearity was observed between 2 variables (e.g., ethnicity and place of birth); when detected, the variable that showed stronger association with the outcome was retained in the model.

**Results**

**Participant Demographics**

A sample of 276 MLWH (118 heterosexual; 158 GBTQ) was recruited from 10 locations across Ontario, Canada (Table 1). The focus of this paper is specifically on understanding the importance of fatherhood within this sample of MLWH. There were 152 (43 heterosexual; 109 GBTQ) respondents that had never parented children, while 115 (71 heterosexual; 44 GBTQ) had parented at least one child. The demographics of the full study sample have been reported in detail elsewhere\(^19\) but are included in Table 1 for reference.

**Importance of Fatherhood**

Of the 276 participants, 191 (109 heterosexual; 89 GBTQ) respondents agreed with the primary question of interest, “Fatherhood is important to me”. Of the 191 participants in agreement, 125 (73 heterosexual; 52 GBTQ) expressed interest in future fatherhood, either agreeing or strongly agreeing with the statement “I would like to be a father in the future”. Of the 118 heterosexual men, 102 said fatherhood was important to them (86%), while 89 out of the 158 GBTQ men said fatherhood was important (56%) (\(p < 0.0001\)).

**Correlates of the Importance of Fatherhood**

Following bivariate logistic regression analysis, the following variables were associated with the primary “importance of fatherhood” question: heterosexual identity (OR 1.52; 95% CI 1.15 to 2.03), African/Caribbean/Black ethnicity (OR 1.57; 95% CI 1.12 to 2.19), African/Caribbean birthplace (OR 1.48; 95% CI 1.06 to 2.05), and history of parenting (OR 1.60; 95% CI 1.10 to 2.39). However, these associations were no longer apparent following multivariable logistic regression analysis (Table 2). Stratified analyses between heterosexual and GBTQ men also resulted in no significant correlates.

**Discussion**

In this study exploring the sociodemographic correlates of the importance of becoming a father among 276 MLWH, 69% of respondents stated that being a father was important to them, which included participants who had never parented children before and those who had parented at least one child previously. This was in alignment with other literature describing the importance all men place on fatherhood\(^22-24\) as well as a 2018 publication on the values and ideals that heterosexual MLWH possess regarding fatherhood.\(^12\) Not surprisingly, advances related to cART, life expectancy, and messages such as U=U appear to have contributed to an increase in positive ideologies related to fatherhood among MLWH, as...
research from the early 2000s found slightly lower rates of pro-fatherhood ideals.8,10 An important contribution to the literature made by this study is the exploration of the impact of sexual orientation on the importance of fatherhood among a cohort of MLWH. The current study’s findings may imply that fatherhood is of greater importance to heterosexual MLWH than MLWH who identify as GBTQ. This finding appears consistent with the other literature related to fatherhood and GBTQ men. Specifically, previous literature has shown gay men are less likely to express a desire for parenthood than heterosexual men, and that gay men who wanted to become fathers were less likely to publicly voice their intentions to do so.25 Our finding might reflect

Table 1. Characteristics of Study Participants.

| Characteristics                      | Whole sample (N = 276) n (%) |
|--------------------------------------|------------------------------|
| **Sexual Orientation**               |                              |
| Heterosexual                         | 118 (43%)                    |
| GBTQ                                 | 158 (57%)                    |
| **Age in years**                     |                              |
| 18-40                                | 86 (31%)                     |
| 41-50                                | 82 (30%)                     |
| 51-60                                | 89 (32%)                     |
| >60                                  | 19 (7%)                      |
| **Ethnicity**                        |                              |
| White                                | 152 (55%)                    |
| African/Caribbean/Black              | 60 (22%)                     |
| Indigenous                           | 29 (10%)                     |
| Asian/Hispanic/Middle Eastern        | 35 (13%)                     |
| **Region in Ontario**                |                              |
| Greater Toronto Area (GTA)           | 136 (49%)                    |
| Eastern Ontario                      | 50 (18%)                     |
| Southwestern Ontario                 | 50 (18%)                     |
| Northern Ontario                     | 40 (14%)                     |
| **Birthplace**                       |                              |
| Canada/USA                           | 179 (65%)                    |
| Africa/Caribbean islands             | 56 (20%)                     |
| Asia/Europe/South America            | 41 (15%)                     |
| **Religion**                         |                              |
| Christian                            | 150 (54%)                    |
| Atheist/Agnostic/none                | 77 (28%)                     |
| Indigenous/Buddhist/Muslim/Other     | 49 (18%)                     |
| **Education level**                  |                              |
| Less than HS completion               | 53 (19%)                     |
| HS completion or higher              | 223 (81%)                    |
| **Employment status**                |                              |
| Working (FT/PT)                      | 89 (32%)                     |
| School (FT/PT)                       | 19 (7%)                      |
| On disability/social assistance      | 139 (50%)                    |
| Retired/other                        | 29 (11%)                     |
| **Household Income**                 |                              |
| <$20,000                             | 127 (46%)                    |
| $20,000 - $39,999                    | 64 (23%)                     |
| ≥$40,000                             | 77 (28%)                     |
| **Number of children parented (ever)** |                      |
| 0                                    | 152 (55%)                    |
| 1                                    | 38 (14%)                     |
| 2                                    | 36 (13%)                     |
| ≥3                                   | 41 (15%)                     |
| **Currently relationship**           |                              |
| Married/common-law/partnered         | 86 (31%)                     |
| Single, but in a romantic relationship| 38 (14%)                     |
| Not in a romantic relationship       | 152 (55%)                    |
| **Current partner’s HIV Status**     |                              |
| HIV-positive                         | 51 (18%)                     |
| HIV-negative                         | 56 (20%)                     |
| Don’t have a partner                 | 164 (59%)                    |
| **Had vaginal sex with a woman (ever)** |                      |
| Yes                                  | 217 (79%)                    |
| No                                   | 59 (21%)                     |

(continued)
### Table 2. Bivariable and Multivariable Regression Models Predicting Importance of Fatherhood among Men Living with HIV (n = 276).

| Predictor variable                                      | Bivariable regression | Multivariable regression |
|---------------------------------------------------------|-----------------------|--------------------------|
|                                                         | OR (95% CI)          | p            | OR (95% CI)          | p            |
| Age (Years)                                             | 1.00 (0.98, 1.01)    | 0.446        | 1.24 (0.87, 1.75)    | 0.235        |
| Sexual orientation                                      |                       |              |                       |              |
| Heterosexual                                            | 1.52 (1.152.03)      | 0.004        | 1.24 (0.87, 1.75)    | 0.235        |
| Gay, Bisexual, 2-Spirit, or Queer (ref)                 |                       |              |                       |              |
| Ethnicity                                               |                       |              |                       |              |
| African/Caribbean/Black                                 | 1.57 (1.12, 2.19)    | 0.008        | 1.40 (0.96, 2.04)    | 0.079        |
| Asian/Hispanic/Middle Eastern                           | 1.15 (0.73, 1.80)    | 0.542        | 1.14 (0.68, 1.88)    | 0.623        |
| Indigenous                                              | 1.21 (0.76, 1.95)    | 0.422        | 1.29 (0.80, 2.08)    | 0.295        |
| White (ref)                                             | 1.00                  |              |                       |              |
| Region of Ontario                                       |                       |              |                       |              |
| Toronto                                                 | 0.99 (0.75, 1.32)    | 0.947        |                       |              |
| Other (ref)                                             | 1.00                  |              |                       |              |
| Birthplace                                              |                       |              |                       |              |
| Africa/Caribbean islands                                | 1.48 (1.06, 2.05)    | 0.020        |                       |              |
| Asia/Europe/South America                               | 1.05 (0.69, 1.59)    | 0.832        |                       |              |
| Canada/USA (ref)                                        | 1.00                  |              |                       |              |
| Religion                                                |                       |              |                       |              |
| Atheist/Agnostic/None                                   | 0.93 (0.67, 1.30)    | 0.677        |                       |              |
| Indigenous/Buddhist/Muslim/Other                        | 1.01 (0.69, 1.48)    | 0.956        |                       |              |
| Christian (ref)                                         | 1.00                  |              |                       |              |
| Relationship status                                     |                       |              |                       |              |
| Married/common-law/living with a partner                | 1.14 (0.84, 1.56)    | 0.407        |                       |              |
| Single, but in a romantic relationship                   | 1.03 (0.67, 1.59)    | 0.882        |                       |              |
| Not in a romantic relationship (ref)                    | 1.00                  |              |                       |              |
| Level of education                                      |                       |              |                       |              |
| HS completion or higher                                 | 0.99 (0.69, 1.42)    | 0.972        |                       |              |
| Less than HS completion (ref)                           | 1.00                  |              |                       |              |
| Work/school                                             |                       |              |                       |              |
| Working (FT/PT)                                         | 1.00 (0.59, 1.69)    | 0.989        |                       |              |
| On disability/social assistance/student                 | 1.14 (0.70, 1.88)    | 0.600        |                       |              |
| Retired/other (ref)                                     | 1.00                  |              |                       |              |
| Annual household income                                 |                       |              |                       |              |
| ≥40K                                                    | 0.72 (0.50, 1.04)    | 0.080        | 0.86 (0.58, 1.28)    | 0.454        |
| 20K-39K                                                 | 1.00 (0.71, 1.42)    | 0.988        | 1.08 (0.75, 1.55)    | 0.695        |
| <20K (ref)                                              | 1.00                  |              |                       |              |
| In a romantic relationship                              |                       |              |                       |              |
| Yes                                                     | 1.12 (0.85, 1.49)    | 0.418        |                       |              |
| No (ref)                                                | 1.00                  |              |                       |              |
| Partner’s HIV status                                    |                       |              |                       |              |
| HIV-negative                                            | 1.13 (0.80, 1.59)    | 0.492        |                       |              |
| HIV-positive/unknown/no partner (ref)                   | 1.00                  |              |                       |              |
| Current contraceptive use                               |                       |              |                       |              |
| Yes                                                     | 1.61 (1.12, 2.30)    | 0.010        |                       |              |
| No                                                      | 1.64 (1.11, 2.41)    | 0.012        |                       |              |
| No female partner (ref)                                 | 1.00                  |              |                       |              |
| Years since HIV diagnosis                               |                       |              |                       |              |
| ≤ 5                                                     | 0.96 (0.63, 1.48)    | 0.858        |                       |              |
| 6-10                                                    | 0.90 (0.58, 1.39)    | 0.630        |                       |              |
| 11-15                                                   | 0.92 (0.61, 1.41)    | 0.707        |                       |              |
| 16-20                                                   | 0.86 (0.56, 1.33)    | 0.506        |                       |              |
| >20 (ref)                                               | 1.00                  |              |                       |              |
| Currently on ART                                        |                       |              |                       |              |
| Yes                                                     | 0.93 (0.60, 1.43)    | 0.732        |                       |              |
| No (ref)                                                | 1.00                  |              |                       |              |
| Current CD4 count (cells/mm³)                           |                       |              |                       |              |
| ≥200                                                    | 0.93 (0.66, 1.31)    | 0.667        |                       |              |
| <200/unknown (ref)                                      | 1.00                  |              |                       |              |

(continued)
Table 2. (continued)

| Predictor variable                  | Bivariant regression | Multivariable regression |
|-------------------------------------|----------------------|--------------------------|
|                                     | OR (95% CI)          | p                        | OR (95% CI)          | p                        |
| Viral load                          |                      |                          |                      |                          |
| Undetectable                        | 0.94 (0.67, 1.34)    | 0.745                    | 1.37 (0.89, 2.12)    | 0.155                    |
| Detectable/unknown (ref)            | 1.00                 |                          | 1.52 (0.99, 2.32)    | 0.055                    |
| Number of children parented (Ever) |                      |                          |                      |                          |
| ≥3                                  | 1.62 (1.10, 2.39)    | **0.014**                | 1.37 (0.89, 2.12)    | 0.155                    |
| 2                                   | 1.45 (0.95, 2.21)    | 0.086                    | 1.34 (0.86, 2.06)    | 0.194                    |
| 1                                   | 1.56 (1.04, 2.34)    | **0.030**                | 1.52 (0.99, 2.32)    | 0.055                    |
| 0 (ref)                             | 1.00                 |                          | 1.00                 |                          |

**Note:** Backward elimination method was used to identify predictor variables significantly associated with intention to have children.

*Note:* “Agree” or “strongly agree” to importance of fatherhood question (“Being a father is important to me”).

**Bold** values represent variables with $p < 0.20$ which were candidates for inclusion in the multivariable logistic regression model.

heterosexual norms associated with fatherhood, which could influence the importance LGBTQ men place on fatherhood compared to their heterosexual counterparts; or at least their willingness to report this importance. Our results and the increasing attention on the parenting rights of people within the LGBTQ+ community highlight the ongoing critical need to normalize the concept of fatherhood for all MLWH, so that potential fathers feel comfortable exploring and disclosing their desires, values, and intentions. It is of note that in our adjusted analysis, sexual orientation was not significantly associated with importance of fatherhood. This could be due to regional factors or other confounding variables, which may be necessary to explore before drawing conclusions between the relationship of sexual orientation and the importance of parenthood.

Our study also provides novel understanding of the role of ethnicity plays in predicting pro-fatherhood ideals among a diverse population of MLWH. Ethnicity was found to be associated with importance of fatherhood in bivariate analysis, suggesting that ethnic and/or racial differences might alter the importance MLWH place on fatherhood. This aligns with previous work identifying differences in the importance that men from different ethnic backgrounds place on fatherhood.1,9,15,16,26 These findings also mirror research on motherhood and HIV, which has identified differences in the importance of motherhood across different ethnic groups.4 The collinearity between ethnicity and birthplace was expected due to their often-inextricable relationship and was considered in multivariable analysis. Again, in our adjusted analysis ethnicity was no longer significantly associated with importance of fatherhood. Nonetheless, further attention can be directed towards understanding the ethnic differences associated with fatherhood in the context of HIV.

A history of parenting also emerged as a significant variable related to the importance MLWH place on fatherhood. As these data suggest, it might make intuitive sense that men who were currently fathers would place a greater importance on fatherhood than those who were not. However, this may not properly reflect the views of all fathers, some of whom are less happy than their childless peers and may therefore place less of an importance on fatherhood.22 It is important to consider this alternative when interpreting our findings, as after adjusted analysis, current parenthood was revealed to be of no significance.

For clinicians and service providers, it is therefore necessary to consider that sexual orientation, ethnicity, and current parenthood may influence how MLWH value fatherhood. Other modelling suggests that fatherhood is more complex among MLWH and should be explored in greater depth during clinical encounters. Clinicians must continually avoid assumptions about who values fatherhood, and instead explore desires related to parenthood with all MLWH. Now more than ever, factors such as sex, gender, and age should not discriminate against pregnancy or parenthood. The authors of this paper were even asked to discuss this topic on a peer-run podcast, highlighting community interest surrounding HIV and fatherhood.23 By further exploring the concept of parenting with men in the context of HIV, optimal care can be provided.

**Limitations**

Our study has some limitations. First, only a single question on fatherhood was addressed in our survey. Fatherhood was also not explicitly defined in this question, which may have resulted in individualized definitions of the term being utilized upon answering this survey item. However, the topic of HIV and fatherhood is expansive and can be further addressed using alternative research questions and methods. Second, this study consists of a convenience sample of MLWH in Ontario, and may therefore not reflect provincial, national, or global trends in fatherhood. The scope of the current study did not allow for an exploration of how other experiences of discrimination and inequity, such as poverty, housing instability, and food insecurity mediate the pro-fatherhood ideals of certain men living with HIV and their actual intent to parent. Research exploring these interactions would continue to improve our understanding of fatherhood and HIV. Also, this study only measured the self-reported
importance that MLWH place on fatherhood; future research might include perspectives from partners and/or children.

**Conclusions**

In this study, 69% of participating MLWH stated that being a father was important to them. Based on univariable analysis, we found that sexual orientation, ethnicity, birthplace, and history of parenting were all significant correlates regarding the importance of fatherhood within the target demographic. However, upon further multivariable analysis, none of these variables were significant. Although some relationships between variables and the primary question were elucidated, the topic of fatherhood and HIV is complex and must be explored in greater depth. Fatherhood can be a highly rewarding experience and may be transformative for men who become fathers. A diagnosis of HIV should not limit an individual’s ability to consider, discuss, and engage in parenthood. Clinicians and other service providers must continue to reduce biases where possible, and instead consider that fatherhood is an aspect of life which is important to the majority of MLWH. Only updates in health policy and clinical practice surrounding fatherhood will bring about widespread positive changes for MLWH. These changes should be actively promoted to increase the health and wellbeing of all MLWH. Additional investigations into contraception use and adoption opportunities in MLWH may provide a more comprehensive understanding of fatherhood in this population moving forward. By identifying and exploring correlates of the importance of fatherhood for MLWH, we hope to contribute towards improved health policy for those interested in parenting in the future.

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