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Review

Amateur Family Genealogists Researching Their Family History: A Scoping Review of Motivations and Psychosocial Impacts

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Abstract: A rapidly rising number of people are engaging in family genealogical research and have purchased home-based DNA testing kits due to increased access to online resources and consumer products. The purpose of this systematic scoping review is to identify and elucidate the motivations (i.e., pathways, reasons for conducting family history research) and the consequences (i.e., psychosocial impacts) of participating in this activity by amateur (unpaid) family genealogists. Studies published from January 2000 to June 2023 were included in our review, using the PRISMA methodology outlined by the Joanna Briggs Institute's (JBI) Reviewer Manual. A total of 1986 studies were identified using selected keywords and electronic databases. A full-text review was conducted of 73 studies, 26 of which met our eligibility criteria. The multiple dominant themes that emerged from the data analysis are organized into five categories: (1) the motivations for practicing family history research, (2) emotional responses to family secrets and previously unknown truths, (3) impacts on relationship with the family of origin and other relatives, (4) impacts on personal identity (including ethnic/racialized and family/social), and (5) identity exploration and reconstruction. Finally, these themes are connected to broader theoretical/conceptual linkages, and further, an agenda for future research inquiry is developed.

Keywords: family history research; family genealogy; DNA kits; ancestry searches; motivations; psychosocial impacts



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1. Introduction

The growth of the family genealogy industry—spurred by rapid advancements in genetic testing and increasingly easy access to online data—provides an unprecedented platform to reconfigure lives based on newly discovered information about family history, kinship, lineage, and ethnic ancestry (Hatton 2019). Indeed, an expanding number of people are searching for genealogical and family history information about their biological relatives using DNA testing kits, databases, online historical public records, and family stories (de Groot 2015; Roberts et al. 2018; Stallard and de Groot 2020). Thus, against the backdrop of general widening family diversity throughout the world, blood relationships and genes have regained sociocultural significance in defining and imagining new identities and family relationships (e.g., Dermott 2008; Gomes et al. 2021; Moore 2023; Nordqvist 2017; Otterstrom et al. 2021).

Substantial interest in family ancestry and genealogical activities is further highlighted in surveys that document the widespread prevalence and motivations for these pursuits. A recent survey indicates that 11% of Canadian adults have submitted their DNA to a commercial ancestry and health database, and that another 60% were open to doing so (Abacus Data 2019). One U.S. survey shows even higher DNA usage at 1/5 adults (Consumer Reports 2020) and that among those who take a home genetic test, the majority (71%) reported that their intention was to investigate their ancestry, while 49% reported a curiosity about their genetic ethnic/racial makeup (Roberts et al. 2018). Another U.S. study

found that 36% of older adult users submit DNA tests to specifically locate/connect with previously unknown relatives (Graff 2019). A 2023 global market report projects that the ancestry/relationship testing field in Canada is forecasted to grow by 14.3% between 2020 and 2030 (Global Industry Analysts 2023). There is also evidence that genealogical search activity surged during the COVD-19 pandemic, partly because of increases in home-based time coupled with the strong desire to make meaningful social connections in times of uncertainty (e.g., see Davis 2020; Hughes 2020). As these data suggest, family genealogy is growing as a worldwide leisure activity and is a rising hobby among all age groups (e.g., see Abacus Data 2019; Regalado 2019; Robinson-Sweet 2021; Stallard and de Groot 2020).

Rising public interest in family genealogical research is also reflected in the growing number of memoirs that document personal journeys to find unknown relatives (e.g., Anderson 2019; Berry 2018; Cumming 2014; Dickinson 2021; Lindsay 2020), journalistic accounts featuring stories of family searches and reunited relatives (e.g., Elzie 2021; Cline 2021; Copeland 2020; Hillier 2020; McIntyre 2021; Nowak 2019; Yin 2018), YouTube video clips and articles offering free advice, tips, and online resources such as family tree building templates (e.g., see Duke 2020). There is also an ever-expanding number of popular television series documentaries on genealogy such as: Long Lost Family, Who Do you Think You Are?, Finding Your Roots, Genealogy Roadshow, The Genetic Detective, and The Generation Project.

Yet, scholarly research on amateur family genealogists researching their family history is in its infancy, in part, due to new technological developments. Numerous companies such as AncestryDNA offer membership services with extensive access to online historical records, as well as an autosomal DNA home testing kit, with a test first launched in the United States in 2012. It became available later in the United Kingdom, Ireland, Australia, New Zealand, and Canada in 2015 and was launched in another 29 countries in February 2016 (Ancestry.ca 2020; International Society of Genetic Genealogy Wiki 2023).

A preliminary review of the research literature on this subject has identified several broad themes that guided the research question for this scoping review. The first theme is how family history and genetic searching for biological relatives is a form of serious leisure, including memory-making and information seeking (e.g., Angelo et al. 2020; Barklay and Koefoed 2021; Barnwell 2013; Marcon et al. 2021; Nordqvist 2017; Otterstrom et al. 2021; Shaw and Donnelly 2021a, 2021b; Stallard and de Groot 2020; Yakel 2004). Research has also dealt with explorations of social identity, commonly conceptualized as a person's sense of who they are, based on their group membership(s) (e.g., see Tajfel and Turner 1979). In this context, social identity themes encompass racialized, Indigenous, socioeconomic, gendered, social, and family/kinship identities (e.g., Bottero 2012, 2015; Hackstaff 2009, 2010; Hatton 2019; Lawton and Foeman 2017; Nash 2002; Nelson 2016; Nicolson 2019; Panofsky and Donovan 2019; Parham 2008; Robinson-Sweet 2021; Roth and Ivemark 2018; Roth and Lyon 2018; Scodari 2018; Strand and Källén 2021; TallBear 2013, 2014; Theunissen 2022; Tyler 2005, 2017; Zerubavel 2012).

Furthermore, research has highlighted the communication contexts (e.g., family discussions on genetic discoveries) and other psychosocial impacts (e.g., for emotional health and individual/family wellbeing) in which family secrets or "skeletons in the closet" are exposed (e.g., Clapton 2021; Pappas 2018; Shapiro 2019; Stallard and de Groot 2020). In addition, some discussions have focused on medical/health issues, ethical/privacy quandaries, and legal/social implications of DNA testing, technology, and databanks (e.g., Angelo et al. 2020; Park et al. 2019; Phillips 2016; Reuter et al. 2018; Annas 2006; Zwart 2009; Taylor and Pagliari 2018).

Given the timeliness and social significance of this novel area of research, the purpose of this systematic scoping review is to (1) identify and elucidate the motivations (i.e., pathways, reasons) for conducting family history research; (2) detail the consequences (i.e., psychosocial impacts) of amateur family genealogists participating in this activity; and (3) develop a research agenda to guide future studies in this field. An amateur family genealogist is defined as an unpaid/nonprofessional person who is engaged in research aimed at searching for family history information. This activity may or may not involve

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the usage of DNA kits. Moreover, although the terms genealogy and family history can be defined differently, they overlap in content and methodology and are often used synonymously (Reiser 2012), unless specifically indicated (e.g., see Moore et al. 2021 for a full discussion of terminology and a brief history). It should also be noted that we do not include medical, clinical, or bio-health-based research studies, including those that deal with genetic testing for health risks/conditions and genetic counselling. We also do not include studies that focus on ethical/moral issues and legal implications. This body of research is incredibly vast and somewhat peripheral, thereby warranting separate scoping review(s).

2. Methods

2.1. Search Strategy

For the scoping review, we used the methodology outlined by the Joanna Briggs Institute's (JBI) Reviewer Manual (Peters et al. 2020). This guide provides an overview of scoping review methods and highlights the most recent updates, primarily based on the launch of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses for Scoping Reviews (PRISMA-ScR). This framework was originally proposed by Arksey and O'Malley (2005) and has been further enhanced by the work of Levac et al. (2010). To obtain initial search results, the following set of keywords were used: ("family" OR "relative" OR "genealogy" OR "family history" OR "family genealogy") AND ("ancestry" OR "ancestors" OR "kin") AND ("DNA test" OR "DNA search" OR "genetic test") AND ("impact" OR "outcome" OR "consequence" OR "motivations"). The searches were conducted using the following targeted online databases: APA PsycInfo, Humanities & Social Sciences Index Retrospective: 1907–1984 (H.W. Wilson), Social Sciences Abstracts (H.W. Wilson), and Social Sciences Full Text (H.W. Wilson). Studies published from January 2000 to June 2023 were included. We chose this start date since it followed the advent of the 1990s digital era. This technological revolution significantly transformed the way in which large amounts of information could be reproduced, transferred, and easily accessed by the general public. Additionally, consumer uptake of DNA ancestry home testing emerged on the market in the early 2000s. These changes have combined to create a new "genealogy craze" for "amateur" (unpaid/nonprofessional) family historians (Barnwell 2013; Bottero 2015; Regalado 2019).

This keyword search strategy step was followed by an analysis of the title and abstract text of retrieved papers, and of the index keyword terms used to describe the articles. In addition, a hand search was employed to supplement the reference list of identified articles for additional sources.

2.2. Inclusion and Exclusion Criteria

Our population of interest was the general adult population who practiced family history/genealogy. The pediatric population under the age of 18, health professionals, genetic counselors, and people who did not practice family history search were excluded (e.g., people who only received genetic testing for health risks and health counseling). Only peer-reviewed literature and dissertations were considered and non-peer-reviewed literature such as books and popular press were excluded. Dissertations were included based on the rationale that PhD students select a thesis focus based on newly emerging areas of inquiry. Also, since this study focuses on motivations, perspectives, and/or experiences of conducting family history/genealogy searches and its psychosocial impacts, we excluded clinical research (e.g., genetic risk markers) and literature on the biomedical impacts of family history searches or genetic testing. Quantitative, qualitative, and mixed-methods studies were included. Detailed study eligibility criteria are described in Table 1.

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Table 1. Eligibility criteria.

	Inclusion	Exclusion
Population	 General (adult) population Unpaid/nonprofessionals People who practiced family history/genealogy 	 Pediatric population (aged < 18) Health professionals People who only received genetic counseling
Study type	Peer-reviewed literatureDissertations	Non-peer-reviewed literature (e.g., books, popular press)Conference papers
	 Motivations to explore family history/genealogy 	Motivations to conduct genetic counseling
Study topic	 Experience, consequence of conducting family history/genealogy 	Clinical gene testingPrenatal testing
Methodology	 Quantitative studies Qualitative studies Mixed-methods	Systematic/scoping reviewsEditorials
Outcome	Psychosocial impacts of conducting family history/genealogy search	Biomedical impact of family history/genealogy and/or genetic test

2.3. Procedure

The screening procedure was conducted using the Covidence online platform (https://www.covidence.org/) (accessed on 22 June 2023). Covidence is a web-based systematic review program that aims to make evidence synthesis a more proficient process, enabling users to work through the steps of the systematic review process more fluidly (Babineau 2014). Sources that met the inclusion criteria were imported to Covidence and duplicates were excluded. Two independent reviewers completed two rounds of screening for the review. The first stage was a title and abstract review based on the study eligibility criteria. Issues during the title and abstract screening process were discussed together with a third independent reviewer. Studies such as grey literature or conference papers were excluded. The second stage was a full-text review. Systematic reviews/scoping reviews and study protocols were excluded. Detailed reasons for exclusion are presented in a PRISMA flow diagram (Figure 1).

2.4. Data Analysis

The key characteristics of selected articles were extracted and organized by one author into a custom-made Microsoft Word spreadsheet. Data extraction included article identifiers (authors and year of publication), study details (study population/sample size, country, study aims/purpose, study design, data collection methods), and key findings of the study based on the research questions (see Appendix A). When completed, data were crosschecked by the second reviewer. Thematic analysis was conducted to identity, analyze and interpret patterns of meaning ("themes") across the included studies. This approach is useful in terms of identifying trends, common themes, topics, and ideas within and across data in relation to participants' lived experience, views and perspectives, and behavior and practices (Clarke et al. 2015; Maguire and Delahunt 2017). Our study focuses on the identification of major themes related to motivations and/or reasons for conducting family history/genealogy search and its psychosocial impacts.

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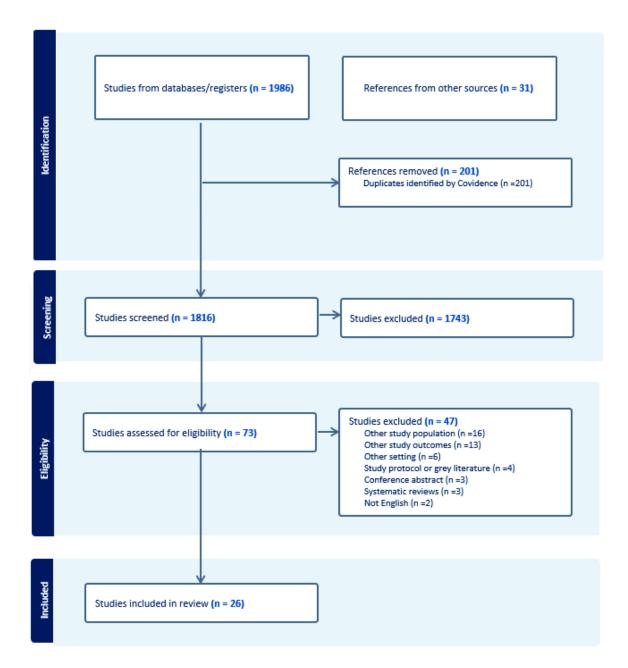


Figure 1. PRISMA flow diagram.

3. Results

A total of 1986 studies were identified through the first round of searching using selected electronic databases. After removing duplicates, 1816 titles and abstracts were screened, with 1743 studies excluded. The full-text review was conducted with 73 studies, 26 of which were identified based on all eligibility criteria. The most common reasons for exclusion during the full text review were other study population (e.g., pediatric population, people who only received genetic counselling and did not practice actual family history search), other study outcomes (e.g., biomedical impacts, prenatal testing), and other settings (e.g., clinical setting).

3.1. Characteristics of Included Studies

Among the final 26 selected items, there were 18 journal articles and 8 doctoral dissertations. Selected studies were published between 2008 and 2023, many of which (n = 20) were published after 2015. As shown in Appendix A, of the 26 studies, 25 were conducted in

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a single country: USA (n = 17), Australia (n = 3), UK (n = 2), Canada (n = 1), Sweden (n = 1), and New Zealand (n = 1). One study was carried out in Australia, Canada, and the UK. Many studies explored the motivations and experiences of study participants in practicing family history search and its impact on their family relationships and individual identity. The age of study participants was significantly broad, from a young adult population (aged 18 or older) such as college students to older adults including the oldest-old group aged 80 or over. Over a half of the studies (n = 14) adopted a qualitative approach exploring the experiences of conducting family history search using semi-structured interviews and/or focus groups. Seven studies adopted a quantitative approach using (online) surveys, while five other studies utilized a mixed-method approach encompassing both qualitative and quantitative approaches. One study utilized computational methods called latent Dirichlet allocation (LDA) to investigate online discussion about direct-to-consumer genetic testing among social media users.

The multiple dominant themes that emerged from the data analysis are organized into five categories. These groups include (1) the motivations for practicing family history research, (2) emotional responses to family secrets and unknown truths, (3) impacts on relationship with the family of origin (i.e., the family that the participant was raised in and/or that they currently identify as their primary family) and other relatives, (4) impacts on personal identity, and (5) identity exploration and reconstruction (see Table 2).

Table 2. Description of the categories and themes.

Category	Theme
Motivations for practicing family history research	General recreational curiosity
·	Seeking to answer specific ancestry questions
Emotional responses to family secrets and unknown truths	Negative or distressing emotional reactionsAmbivalent or fluid reactions
Impacts on relationship with the family of origin and relatives	 Better understanding of family roots and connectedness Strengthening/weakening the family bond
	Development of self-identity and family identity
Impacts on personal identity (including ethic/racialized and family/social)	Transformation of racial and ethnic identities
·	 Drawing selectively upon family history/DNA results
Identity exploration and reconstruction	 Active engagement in further genealogical research Barriers in information-seeking processes

3.2. Categories and Themes

3.2.1. Motivations for Practicing Family History Research

Although the family genealogy literature is sparse, some studies have addressed the motivation for engaging in this activity. These coalesce around two major subthemes: the curiosity to know more about one's family history/ancestry as a recreational hobby and the desire to answer specific ancestry questions.

General recreational curiosity

Some studies found that many individuals engaged in ancestry research for general recreational genealogical interest, albeit this can in some instances lead to solving a specific family question (Daniel 2021; Moore 2023; Parham 2008). Participants interested in ancestry research as an enjoyable form of leisure were often inquisitive about their family roots, either for personal curiosity or to better understand and connect with their ancestors. Some

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amateur genealogists were also inquisitive about their generational lineage, such as Black history, or to gain, and then pass on, family stories, legends, and wisdom to younger/future generations (Parham 2008; Smith 2008). Making this connection provides a link between past and present that provides a sense of comfort and insight into their family legacy. It can also support family communication and connectedness via the development of family narratives (Smith 2008).

• Seeking to answer specific ancestry questions

The findings of the studies revealed that a key motivation for conducting family history research can entail the desire to answer one or more specific family ancestry questions (Daniel 2021; Kramer 2011; Lee et al. 2021; Nelson et al. 2019; Reiser 2012; Rubanovich et al. 2021; Smith 2008; Yin et al. 2020). The majority of these studies focused on paternity and/or adoption, based on a motivation to resolve a family mystery or gain more clarity about their birth relatives and adoption story (Lee et al. 2021; Straughn 2023). In some studies, it was discovered that accessing individual's medical records (e.g., hospital) to answer these questions were very limited or not available at all via formal channels (Nelson et al. 2019; Newton et al. 2023; Yin et al. 2020). For instance, the study participants of Newton et al. (2023) who were donor-conceived, expressed immense frustration and anger in relation to record-keeping practices, which created barriers in identifying biological parenthood. The researchers of this study found that there were widespread negative attitudes and distrust towards the health facilities in which participants were conceived and towards the authorities responsible for overseeing assisted reproductive technologies. Since some DNA companies offer genetic health information with relatively fewer limitations, unlike relevant formal authorities or registries, DNA testing was perceived to be a significant source of individual/family health history and information among amateur family genealogists (Daniel 2021; Lee et al. 2021; Nelson et al. 2019; Newton et al. 2023; Rubanovich et al. 2021; Yin et al. 2020).

3.2.2. Emotional Responses to Family Secrets and Unknown Truths

Few studies focused on the emotional reactions that individuals experienced in response to uncovering family secrets or previously unknown family histories. Two subthemes emerged: negative or distressing reactions, and ambivalent and fluid responses.

• Negative or distressing emotional responses

The small subset of research studies that examined emotions primarily reported the experience of negative or distressing reactions to discoveries among family genealogists. This is, in part, was due to contextual factors, such as the research question of the author(s), a focus on emotions at time of discovery versus the general experience of the activity, and/or the type of genealogical discovery (e.g., paternity, adoption status). In a survey of 775 Australian amateur family historians, Moore (2023) found that, while the ancestry research activity itself is largely a positive leisure experience, approximately two-thirds of their sample reported distressing experiences, especially during the discovery process, including anger, shock, and sadness. However, the aim of their study was to examine difficult and challenging experiences associated with ancestry research and discoveries. Other studies examining unexpected paternity (Grethel et al. 2023) or adoption paternity (Straughn 2023) also uncovered initial strong negative emotional responses during ancestry discovery, such as shock, anger, confusion, fear, panic, or denial, due to newly identified familial history secrets and unknown truths. In some cases, they described a sense of personal loss of genetic relatedness, as well as a fear of potentially losing connections not only to their father but also to their birth certificate family (Grethel et al. 2023). One exception to this pattern is a study by Rubanovich et al. (2021) that initially focused on direct-to-consumer health-related DNA testing, of which a small proportion (10%) also received ancestry DNA testing at no charge. While the authors reported high levels of surprise (46%), very few reported distress; however, this study may be prone to selection bias, since the original sample entailed persons seeking health-related DNA information.

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Ambivalent or fluid reactions

Although responses to genealogical discoveries have been typified as primarily negative, some research suggests that they could be mixed/ambivalent or reactions that appear to change over time. These responses also tend to be dependent upon the unique contextual circumstances of the activity (e.g., seeking a family secret/unknown truth, such as unexpected paternity, adoption, or other reasons). For instance, Lawton et al. (2023) found a mix of emotions from a misattributed parentage experience (MPE) discovery that varied depending on three types: adoptees, assisted conception, and nonpaternal event. In addition, Straughn (2023) discovered that the participants in their focused study (adoptees receiving the results of their kits) experienced both anxiety and excitement, which could be interpreted as ambivalent or contradictory emotions. In another study, Foeman et al. (2015) used mixed methods to explore how individuals react to ancestry DNA findings, demonstrating that the largest percentage of participants (37%) felt surprised about their DNA profile (which could entail different emotions), followed by primarily positive reactions (24%). Freeman (2021) also found the co-occurrence of both positive and negative emotional responses, and that there may have been an acceptance of negative results over time, suggesting some forms of adaptation or coping. However, studies have been mainly cross-sectional or retrospective in design, and have typically collected emotional reactions among specific subgroups of amateur genealogists (e.g., adoption, paternity, etc.), leaving many questions unanswered.

3.2.3. Impacts on the Relationship with the Family of Origin and Relatives

Better understanding of family roots and connectedness

Research findings across the studies suggest that the newly identified family history and genealogy data allowed participants to connect with their childhood experiences and memories (Daniel 2021; Kramer 2011; Morstead and DeLongis 2023; Reiser 2012; Smith 2008). One of the study participants (Daniel 2021), for example, found that their parents' marital conflicts were directly a result of his birth certificate because of his father questioning paternity. They described how discovering the new paternity information helped them to comprehend childhood memories. Study participants discussed how this information contributed to an enhanced understanding of how they felt they fit in with their family of origin, or why they were treated in particular ways while they were growing up (Daniel 2021). Additionally, many of the participants in another study by Reiser (2012), recognized unique physical characteristics in ancestral family lines that were apparent in themselves or their family members. Other participants talked more about the personality characteristics identified by themselves, their immediate family members, or ancestors.

Study participants articulated how information of unexpected paternity contributed to forming an understanding of how they fit in within their family of origin, thus situating them in their own family history (Daniel 2021). This research also provided a deeper comprehension of why some participants felt "different" than their siblings (Daniel 2021). For instance, in a study by Reiser (2012), participants recognized unique physical characteristics in ancestral family lines that were apparent in themselves or their family members and substantiated through DNA testing. The confirmation of a family lineage that separated them from other family members helped to explain their sense of "otherness", while sometimes helping to resolve the underlying feelings associated with a fragmented lineage. Other participants elaborated more about the unique personality characteristics identified by themselves, their immediate family members, or ancestors that were brought into focus after the genealogical discovery. While surprising genealogical research findings pertaining to paternity can affect closeness of family relationships, there were also instances of bringing family members emotionally closer together.

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Strengthening/weakening the family bond

The influence of family history research can be positive in that it creates new bonds or strengthens existing ones with family members (Reiser 2012; Smith 2008). Specifically, the majority of participants in a study conducted by Smith (2008) reported positive interactions, often citing instances where their discussion of genealogy worked towards bringing family members closer together. Also, they often discussed an increased level of communication with extended family members. For example, one of the participants pointed this out when they reflected on how their exchange of genealogical data at family reunions strengthened their relationship with her mother, while also increasing communication among extended family members. In addition, Reiser (2012) noted that genealogy research not only helped develop the relationship between study participants and their parents, but it also improved the relationship with their siblings as well. This study also showed that the investment in family history search helped immediate family to converse more and to understand the participants' parents or siblings better. Yet, the negative impact on family bond was revealed as well. Some amateur family genealogists noted that the act of conducting genealogy research may result in tensions or discord between family members and family genealogist (Smith 2008).

Some studies identified pressures on family relationships created by the findings from family genealogical research, such as when presumed biological relationships are proven to be inaccurate, or when family members express different levels of acceptance of results (Daniel 2021; Kramer 2011). Despite the possibility that genealogy data may place family relationships in jeopardy, the possibility for connection and bonding can be "worth the risks". For example, Smith (2008) demonstrated that the concept of a "common family identity" plays a role in determining the impact of genealogical data on family communication. Those who reported having sporadic communication with extended family members discussed how they were able to use their genealogy research as a way to connect with those family members. Participants who identified their family as being close-knit reported similar instances of genealogical data bringing the family closer together. In this way, the genealogical information serves as a way to bridge the gap and as a starting point for social conversation (Smith 2008).

3.2.4. Impacts on Personal Identity

Development of self and family identity

The majority of study participants across the studies described that their personal identities were altered as a result of the genealogical research (Daniel 2021; Evans 2021; Lawton et al. 2023; Moore 2023; Reiser 2012; Rubanovich et al. 2021; Straughn 2023; Theunissen 2022). They frequently expressed how exploring genealogy influenced their personal identity or sense of self and belonging in a number of ways. Many indicated that they had a desire to improve themselves due to examples of selfless, hard-working ancestors who exhibited strong values and overcame great adversity (Reiser 2012). Other participants found that family history research has significant value and meaning for society's younger citizens, helping them to better understand their lives and their contribution to the world (Evans 2021; Reiser 2012). In contrast, adoptees or doner-conceived people were typically found to be less impacted from unexpected genealogical findings compared to other groups (Lawton et al. 2023; Moore 2023).

Furthermore, it has been recognized that genealogical research also influences one's family identity (Stallard and de Groot 2020; Theunissen 2022). For instance, participants noted that genetic genealogy research had considerable influence on their conception of their families and their social position or place within them. For instance, these studies showed that discrepancies in the DNA test results uncovered by participants prompted a renegotiation of identity and positionality. This affected their sense and feelings of belonging to their perceived social groups, especially their family and biological groups. Similarly, Kramer (2011) found that genealogy facilitates a sense of belonging in time and connectedness across generations, in addition to belonging to new, or newly reconfigured

places of importance. In this sense, socially constructed groups fostered their belonging and feelings of being connected (Theunissen 2022).

Transformation of racial and ethnic identities

Our analysis of themes and subthemes also found that unexpected results could shift ethnic identity (Daniel 2021; Foeman et al. 2015; Roth and Ivemark 2018). Some of the participants expressed confusion because of the difficulties created from continuing to live within the culture they were raised. One of the participants in the Daniel (2021) study, for example, stated, "I kind of feel like I don't fit in to those ethnicities". Another participant shared, "The first time I cooked an Italian meal after I found out was the hardest thing ever. I felt like, here I am cooking a meal of a culture that I no longer belong to". In comparison, some amateur family genealogists did not change their existing racial and/or ethnic identities based on DNA testing results, even if the DNA profile was quite different (Foeman et al. 2015; Roth and Ivemark 2018). Some reported that they would share results with friends and family, as well as include the new information as part of their "story", but few said that they would change their racial identification. Other amateur family genealogists alluded to their biogeographic ancestry and biological identity making them feel connected to an area, with their tests prompting interest in wanting to learn more about these areas and their relationships with their family identities (Theunissen 2022). Instead of changing their perceived identities, they showed an interest in actively broadening their understanding of their own identities. Engaging in further genealogical research is described in more detail in the last category of this paper.

Drawing selectively upon family history/DNA results

In several studies, researchers found that participants selectively chose which genetic information and test results to draw upon, in tandem with their own interpretations of this new information (Roth and Lyon 2018; Roth and Ivemark 2018; Strand and Källén 2021). Foeman et al. (2015) also confirmed that a significant portion of their study participants (29%) were equally as likely to dig deeper into their history and not change the family narrative despite the result of their (unexpected) DNA testing, while only 9% would change the narrative completely. In particular, the racial differences in accepting the results of family history search were highlighted in several studies (Foeman et al. 2015; Hunt 2022; Peters 2022; Rubanovich et al. 2021). Whereas Black Americans were more likely to use genetic ancestry testing (GAT) as part of broader genealogical research to establish their roots, discoveries did not tend to affect identities (Roth et al. 2022). Whites were more likely to take the test recreationally or to reaffirm their true racial or ethnic identities. The selectivity of racial findings in genetic research on identities remains equivocal and in need of further research (Foeman et al. 2015; Hunt 2022).

3.2.5. Identity Exploration and Reconstruction

• Active engagement in further genealogical research

Many amateur family genealogists expressed a desire to practice additional genealogical research in the future. Over half of the survey respondents in one study reported being more likely to undergo other genetic tests (Rubanovich et al. 2021). It was also found that almost all participants used more resources than a single genetic test kit as a way of information-seeking and took a multifaceted approach to gathering further information (Straughn 2023). Other studies also confirmed that many participants actively engaged in independent investigative work to learn the identity of their newly discovered relatives following the discovery of a previously unknown family secrets (Grethel et al. 2023; Theunissen 2022). Since DNA testing offers an appealing and often productive way to broaden engagement with genealogical research, many amateur family researchers encourage other family members to undertake DNA tests. Persuading other family members to take these DNA tests can help them to better understand the complexity of their descent, as well as to establish more genetic matches and thus generate new genealogical family formation (Stallard and de Groot 2020). For instance, in the Grethel et al. (2023) study, the

discovery of an unexpected biological family was seen as an opportunity not only to form new familial connections, but also to make sense retroactively of various other aspects of their lives. Many of them used this information to reconcile histories of adoptions, infidelity, sibling rivalries, and hereditary genetic conditions, leading to an identity reconstruction.

Barriers in information-seeking processes

Barriers in gathering genealogical information were highlighted among many study participants, not only in the process of typical genealogical research but also in further investigations. In the case of adoptees, many identified a range of barriers in the process of genealogical research including high costs and institutional barriers (Nelson et al. 2019; Newton et al. 2023; Straughn 2023; Yin et al. 2020). One cost associated with information searching included court fees to access documents and the price of hiring investigators. Others were unable to pay the fees and therefore unable to search via those avenues. In addition, state courts or the adoption agency frequently presented insurmountable barriers for record access. Such barriers included state courts that only allow for certain parties (i.e., birth relatives) to access confidential records (Straughn 2023).

4. Discussion

The five key categories that emerged from our analysis are (1) motivations for practicing family history research, (2) emotional responses to family secrets and previously unknown truths, (3) impacts on relationship with the family of origin and other relatives, (4) impacts on personal identity (including ethnic/racialized and family/social), and (5) identity exploration and reconstruction. Within these categories, we also identified important subthemes.

The first category captures the most popular reasons for engaging in family genealogy: curiosity and the desire to know more about one's ancestry (e.g., to enhance self-understanding, fostering understanding of one's family and past) and to seek health information. Indeed, some scholars (Moore et al. 2021) argue that curiosity and the cognitive/intellectual puzzles involved in this "detective work" are powerful motivators for participating in this activity. Moreover, some participants engage in family genealogy for altruistic reasons, or as a means to create a legacy and generativity (giving back to future generations), as well as to facilitate healing and increase spirituality (Reiser 2012). Similarly, the search for self and the desire to make connections with others often occur in the context of kinship, and in Western society, and this is predominantly constructed through biological relatedness (Kramer 2011; Schneider 2014). Thus, for some individuals (e.g., adoptees), seeking this information in order to make sense of kinship can be spurred due to little or no information about biological relatives, including biological family health history (Lee et al. 2021).

The next category that surfaced from our scoping review highlights the various emotional reactions experienced after discovery of family secrets or previously unknown family truths. Although these reactions were often interpreted by emphasizing (binary) negative or positive themes depending upon the circumstance (e.g., unexpected paternity), it was not uncommon for participants to report multiple, fluid, and sometimes ambiguous/ambivalent emotions that can be difficult to classify (e.g., initial surprise or shock can include excitement and distress but move to gradual acceptance). Based on the small number of studies that addressed emotional responses to a family discovery, and since they tended to focus on a particular type of context (e.g., unexpected paternity), it is challenging to arrive at a singular conclusion. Similarly, the general effects of conducting family genealogy on the relationship with the family of origin and other relatives often includes varied responses such as rejection or acceptance, but it can also facilitate improved understanding and connectedness to others. Fostering connections to ancestors can similarly generate empathetic or negative/positive reflections on legacy and lived experiences (e.g., heinous acts, sacrifices, struggles) of relatives. Some participants also ensured that these ancestors are commemorated, both in the present and by future generations (Stallard and de Groot 2020). Overall, the direct impacts on others appeared to vary in terms of strengthening

or weakening the family bond. These consequences are also dependent upon the context, specific relational bonds, and unique situations of the families involved.

Our next category emphasizes research studies conducted in the broad area of identity, with the recognition that identity is an elastic, fluid, and multifaceted social construct. The thematic subcategories that emerged include the development of self and family identity, and impacts/transformations of racial and ethnic identities. As Bottero (2015) argued, family history reworks self-identity, and genealogy is often framed as a quest to know "who you are" with regard to "where you come from" (Nash 2002, p. 28). Moreover, conducting family genetic research is found to transform racial and ethnic identities, especially DNA tests, since recipients often privilege genetic information due to its sheen of scientific "truth" (e.g., see Roth and Ivemark 2018). Yet, researchers have also noted that participants may also draw selectively on their family history/DNA results, since they may not adopt new geneticized identities but, rather, may incorporate some ancestries and reject others to maintain a positively valued and distinct identity (e.g., see Nelson 2008, 2016).

Finally, the fifth category encompasses the broader topic of impact on identity exploration and identity reconstruction. Many researchers (e.g., Bottero 2015; Moore et al. 2021) have highlighted the enjoyment and cognitive challenge of trying to solve family mysteries, as well as for "identity work" and "self-making". It is not surprising, therefore, that some researchers find that many of those who participate in this activity make plans to continue or pursue their involvement in family genealogical research. Yet, many of these family genealogists can experience barriers and challenges as they navigate their research, such as limited access to records and significant financial costs.

5. Limitations and Future Research

Our scoping review has several noteworthy limitations. One possible weakness of our study was our challenges associated with choosing our keyword search strategy, which required supplemental hand searches. This issue was likely due to the fact that this is an emergent topic area and constitutes a "new" subject matter, clouded by a myriad of terms. Thus, some keywords and subject headings have not been updated and fully catalogued in academic libraries/electronic sources by librarians. Moreover, we did not include medical or bio-health-based research studies (e.g., dealing with genetic testing for health risks/conditions and genetic counselling) nor studies focused on ethnical/moral issues and legal implications. As previously noted, these bodies of literature are quite vast and warrant separate scoping reviews. Yet, some of this research sometimes spilled into our scoping review, since it met our eligibility criteria and constituted a motivation for engaging in this activity. Furthermore, given that this field of research is rapidly evolving, it is possible that we may have missed some important recent research and/or that some "grey" research could be useful to review. For example, there are large numbers of nonacademic personal memoirs and autobiographical accounts that could provide some valuable insights into the lived experiences of amateur family genealogists and inform our thematic analysis. Finally, our scoping review is limited to texts written in English, although it did not appear that any studies have been published in other languages.

6. Developing an Agenda to Guide Future Research

Our third aim of this scoping review is to identify and generate a fruitful agenda to act as a springboard for future studies. We highlight several areas for future inquiry in terms of theoretical and conceptual developments; diversity and sample bias; research design; gender, race, and other intersections; psychosocial impacts; identity; and family relationships. We also offer some additional thoughts on how future research can incorporate our current and evolving state of knowledge on this topic.

There are many opportunities to develop conceptual linkages, theories/models, and applications, and to expand the current body of work. Freeman (2021) suggested that family systems theory (drawing on Hall 1981) and the ABC-X model (Duncan and Goddard 2017) could be applied to this field to understand stressor events, such as when one member of a family can trigger changes in the family network due to a genetic discovery. Although not applied yet, life course theorizing (e.g., see AC, Elder 1998; Hareven 1996) also holds promise for better understanding and bridging interdisciplinary linkages between human biographies, aging families, intergenerational relations, and changing social environments. This guiding perspective also emphasizes historical and generational change, family transitions, "turning points", and diversity in family trajectories, resources, and experiences. There is also ample room to synthesize and integrate more strength-based family resilience models in areas that relate to stress, coping, and intergenerational trauma.

Moreover, some researchers have suggested the need to incorporate more critical theoretical perspectives, including global feminist theory (e.g., see Evans 2021), feminist narrative theory (Oikkonen 2013), and race and intersectionality theory (Hackstaff 2010). For example, critical race theory (CRT), synthesized with the concept of identify negotiation, highlights how sociocultural conditions generated by genetic discovery comprise composite identities (e.g., see Peters 2022). Critical discourse theory could also help elucidate how genetic knowledge and larger public discussions reproduce power dynamics and inequalities through text-based and publicly mediated discussions.

It may also be useful for researchers to incorporate more diverse samples, since many study cohorts are homogenous in terms of being older, well educated, White, and female (e.g., Yin et al. 2020). Few studies have focused on younger populations, such as children, adolescents, and college students, and there may be generational differences in identity development and family relationships. These unique developmental phases can also differentially impact the need for tailored family therapy interventions and affect healing-related processes, connections to ancestors, and social roles, as argued by Reiser (2012). Indeed, stress or trauma can affect brain development earlier in life and stress correlates with many health-related conditions and diseases over the life course, as noted by Freeman (2021). In addition, issues of selection or sample bias plague some studies. For instance, Straughn (2023) recruited all of their participants from social media platforms such as Instagram and Facebook, and these individuals appeared to be more open to support and help-seeking behaviors.

Another noteworthy observation is that most studies do not focus on gender or intersections of gender, ethnicity, and race, and Indigeneity (e.g., see, Grethel et al. 2023). As Peters (2022) argued, the majority of participants in the genetic ancestry industry are women, and asked, "How does genetic genealogy became a gendered practice, narrative, and space (p. 272)?" Moreover, some of these assumptions enable social constructions of race and subvert racial subject positions, given that some aspects of identity (e.g., ethnic identity) are malleable, situational, and contingent and are co-constituted by aspects including age, sexuality, class, and gender (Strand and Källén 2021).

Given that small qualitative studies aim for depth rather than breadth and can lack generalizability (Grethel et al. 2023; Straughn 2023), and large quantitative studies can gloss over rich, lived experiences, it would be fruitful to design studies that incorporate mixed methods. Innovative data analytical approaches could also be adopted. For instance, Yin et al. (2020) suggested that future investigations could apply advanced topic modelling and linguistic tools designed to support semantic analysis and other tools dedicated to emotion analysis, such as NRC-lexion and the EMOTIVE-ontology.

Another takeaway message from our scoping review is that virtually all studies examined changes in emotions, identit(ies), or family relationships retrospectively and, at one point in time, cross-sectionally (e.g., see Daniel 2021; Roth and Ivemark 2018). Prospective studies could uncover changes in initial distressing, negative emotions or how moral dilemmas are mitigated by other individuals, including support from family, friends, or healthcare professionals (Daniel 2021; Moore 2023; Stallard and de Groot 2020).

Studies could also adopt an appropriately powered and inclusive longitudinal design, as well as a pre/post-study design with immediate and long-term follow-up timepoints (Rubanovich et al. 2021). Studies should measure aspects such as a person's identity prior to behaviors such as purchasing a genetic test as well as before receiving their results (Roth and Ivemark 2018).

Finally, there is also a need to engage in inclusive, nontraditional data collection efforts given the heavy reliance on surveys, interviews, and focus groups. Some of these methods lack suitability for some under-researched groups. For example, storytelling has often been used among Aboriginal people as a means for history and culture to be passed down family ancestral lines. Thus, arts praxis, oral histories, and everyday stories can provide an important vehicle "for retrieving cultural memories that constitute the identities of people in different places" in postcolonial settings (Sonn et al. 2014).

In terms of research on motivations for conducting family research, these studies are relatively scant and often provide statistical summaries of these reasons based on close-ended responses to surveys. One quantitative study (Morstead and DeLongis 2023) examined the psychosocial processes underlying the motivation to uncover family secrets and pursue direct-to-consumer genetic tests using measures tapping into self-concept and adverse childhood experiences. Similarly, Moore (2023) highlighted psychosocial motivations and linked them to personality traits. However, qualitative studies are also necessary to better understand the lived experiences of these individuals (e.g., see Lee et al. 2021). It would also be informative to conduct more robust comparisons of diverse pathways and between DNA test-takers and non-test-takers (Lee et al. 2021).

In addition, further research on motivations related to uncovering the geographical location of ancestors requires is needed. For example, it is possible that some testees may want to elucidate paternal ethnicity and location through Y-DNA (e.g., ancestral Scots) by searching for their family "genetic heartland" or to join a surname group, such as a clan society (e.g., see Durie 2022). Thus, further detailed and nuanced examination of the various contextual pathways that inspire or instigate individuals to pursue their genealogical research and undertake testing could further elucidate these processes. Yet, Kramer (2011) also questioned the reliance and practice of asking people what personally motivates them to undertake genealogical investigations. Instead, he argued that we may want to look closer at anthropological insights of kinship relatedness and remembrance, as well as related sociological work on collective identity and affinity.

There are also several additional research possibilities in the area of psychosocial and health-related impacts, identity, and family relationships. With regard to emotional responses, Grethel et al. (2023) emphasized the need to explore risk and protective factors that can enhance resilience during difficult experiences. It is observed that most research on psychosocial impacts tends to focus on individual emotional impacts, such as distressing emotions (e.g., see Moore et al. 2021). Some researchers incorporate other psychological issues related to adverse childhoods, self-concept, and personality traits (e.g., see Morstead and DeLongis 2023; Moore 2023). Yet, there is the possibility that individuals are affected by, and can experience, a much wide range of psychological and health-related outcomes. Studying these areas can assist those who work as family, social/human service, and healthcare professionals (e.g., family therapists, counsellors, doctors).

More attention also needs to be paid to how family research and DNA results affect identity formation for certain social groups by applying different lenses, such as narrative, racial identification, and ancestry DNA "shift as we attempt to examine them" (Foeman et al. 2015). Theunissen (2022) also suggested that we need to study future identity shifts for those who were separated from families through wars, conflicts, colonization, as well as adoptions. Moreover, it is important to pay attention to feelings of belonging in both livedin and biologically shaped environments, since "feelings of belonging with multiple group identities elucidate the changing notions of family" (p. 13). Indeed, the genetic industry can differently promote a new form of "geneticized identity" (Nash 2004). For example, Newton et al. (2023) affirmed the unique effects of DNA test results for donor-conceived

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adults' experiences, both in relation to familial belonging and belonging among others "like me". In addition, Smith (2008) asserted that it would be beneficial to pay more attention to the topic of family reunions (virtual and in person). These kinds of family get-togethers are a way of connecting with extended family members and can also serve as a time for some to communicate and re-form family identities with other family members, for example, in relation to the collection and dissemination of "new" family genealogical information. Collecting data on sporadic family gatherings, such as family celebrations, in addition to the sharing of family artifacts (e.g., items inherited or passed down upon death) and how they shape the collection of genealogical data could also be useful.

Incorporating multiple family perspectives (e.g., mothers, fathers, birth certificate parents, siblings, new biological relatives) would also be valuable, since most studies have focused on the experiences of one person (Daniel 2021). For instance, Stallard and de Groot (2020) found that a sizeable number of their study participants had half-siblings, which increased the likelihood of distressing emotions. Moreover, DNA tests can serve to connect users with a wider range of living people, thus producing family networks that are more elaborate but also more distant. Future research should study the impact of genetic DNA results on others (e.g., family members), since few studies have examined how others react or use this information (Rubanovich et al. 2021).

Finally, with the growing number of amateur family historians and the rising popularity of genetic testing, researchers need to broaden and problematize the idea of what constitutes "family" (Stallard and de Groot 2020). Studying family life as a set of activities by integrating the concept of "family practice" can help shift a sociological gaze towards everyday actions, flows, rituals, and habits (e.g., see Morgan 2011; Nordqvist 2017). As argued by Theunissen (2022) "family" increasingly encapsulates multiple identities and will continue to be challenged and refined as more DNA tests are taken along with advancements in genetic technology. Thus, contesting and rethinking notions of family and family practices, biological relatedness, and historical knowledge can help us to reimagine our individual and collective family memories and narratives.

This reflexive practice can also encourage researchers to engage in complex moral and ethical conversations in a rapidly changing global social environment. Indeed, some researchers (e.g., Evans 2021; Parham 2008) have encouraged researchers to more critically reflect upon the work of amateur family historians in an effort to emphasize the public significance of seemingly private family matters. For example, new-found knowledge can increase everyone's knowledge of the history of the family and challenge dominant narratives that were previously thought to be hegemonic (Evans 2021). In this way, genealogy can be "seen as a political practice where race-class-gender within social memories can contribute to diverse stories from new standpoints" (Hackstaff 2010, p. 658).

It is also imperative to examine some critical policy and ethical implications of research in this area (Roth and Lyon 2018). These implications could span legal and ethical topics, especially in high-stakes settings such as healthcare, census reporting, Indigenous identity affiliations, college admissions, and job enrollments (see Rubanovich et al. 2021 for a review). We also need to encourage ethical and moral discussions that target the purveyors of genealogical research products. For example, some see the need for these industries to always provide warnings or a "caveat emptor", in addition to being more attentive to the buying/selling of information, data privacy, and the provision of supports and resources for those who are distressed by their findings (Rubanovich et al. 2021; Stallard and de Groot 2020). Furthermore, some testing companies have been accused of providing or promoting inaccurate or misleading interpretations of autosomal DNA tests related to ethnic culture, origin, and history. Rutherford (2018) argued that while these tests can determine close genetic family relations (such as a parent or child), for deeper family roots, these tests cannot tell you where your ancestors came from, but rather where similar DNA can be found on Earth today.

In closing, this scoping review provides a comprehensive and timely overview of our current knowledge on the motivations for conducing family research, as well as psychosocial consequences in terms of emotional reactions, identitie(s), and family relationships. Our findings also support the notion of the continued expansion of family diversity globally, while concurrently showing how genetic, blood relationships have regained personal and social significance. We also suggest an exciting and fruitful agenda for future research and policy. This discussion also raises many questions about the growing billion dollar genealogical ancestry industry (Nelson 2016), and its potential to profoundly shape and reshape social lives, family, and public narratives, and the burgeoning field of family history and genetics.

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Appendix A

Table A1. Characteristics of included studies.

Authors(s)/Year	Study Population/ Sample Size	Country	Study Participants	Aims/Purpose	Study Design, Data Collection Methods	Key Findings (Based on Research Questions and Themes)
Daniel (2021)	N = 26	USA	Members of a private Facebook support group aged 33–63 entitled NPE Only: After the Discovery (after the completion of a direct-to-consumer DNA ancestry test)	To explore what happens to family relationships, individual identity, and support when adult children unexpectedly discover previously unknown paternity through a direct-to-consumer DNA ancestry test	Qualitative— interviews	 The impact of knowing one's family's history: -Felt shocked about the paternity information and that something was "off". The impact on the relationship with one's family of origin: -Many describe having a better understanding of their mother since the discovery; did not necessarily translate to an improved relationship; -Relationship with birth certificate father: rejection as a theme; -"now things make sense": making connections between childhood experiences and memories after receiving the new paternity information. The impact on individual's identity: -Personal, social, familial and ethnicity identity shifts and changes; -Lack of, or missing health information, resemblance to family, relationship with new family issues, rejection (with new family). Supports during the experience: -Online support group, mental health counseling, etc.
Evans (2021)	N = 131 (surveys), N = 7 (interviews), N = 3 (focus groups)	Australia, England, Canada	Non-professional Family historians, ages not provided	To explore how family historians construct memories using diverse sources in their research	Mixed methods—survey and interviews/focus groups	 "Humanizing the Past": Memory work in families and research communities: The practice of family historians is targeted at rescuing past relatives from anonymity; this process is viewed as empowering for both their ancestors/themselves. From Micro-history to Macro History: Using Family History to Understand National and Global Histories: Their research connected their lives to broader historical narratives. Using History to Challenge "the Truth": Allows individuals to construct memories when there is no oral or material evidence to work with; other researchers use family histories to discover secrets, lies, and to seek out the "truth" of family stories. Constructing Memories Critically and Collaboratively: Family memories are constructed and collaboratively.

Table A1. Cont.

Authors(s)/Year	Study Population/ Sample Size	Country	Study Participants	Aims/Purpose	Study Design, Data Collection Methods	Key Findings (Based on Research Questions and Themes)
Foeman et al. (2015)	N = 45	USA	University students enrolled in an intercultural communication class project	(1) To explore how individuals react to ancestry DNA findings (2) To consider if and how this information will change narratives, behaviors, and perspectives	Mixed methods—quantitative, qualitative	1. Participants' reaction to their DNA profile: -The largest percentage (37%) felt surprised about their DNA profile, followed by positive reactions (24%). 2. Others' reaction to their DNA profile: -Other people were surprised by the results (33%), followed by other responses (25%) such as "retake" and "understandable". 3. Family narratives and change as a result of their DNA knowledge: -Participants were equally as likely to dig deeper into their history and not change the narrative at all. 4. Changes in behaviors as a result of their DNA knowledge: -Almost half of participants stated they would do more research as a result of their new DNA knowledge. 5. Whether participants feel that society will see them differently based on the DNA profile: -About half of respondents do not think society will view them differently. 6 and 7. Change in racial groupings: -Most participants did not change their identification.
Freeman (2021)	N = 5	USA	Black Americans (aged 18 and older) who had completed ancestry testing	To explore shared experiences of Black American adults following results from commercial ancestry testing	Qualitative— phenomenological	 Motivations and Lived Experiences: Testing carried out due to curiosity about DNA and family members; most results revealed unknown family members. Emotional Responses/Impact:

Table A1. Cont.

Authors(s)/Year	Study Population/ Sample Size	Country	Study Participants	Aims/Purpose	Study Design, Data Collection Methods	Key Findings (Based on Research Questions and Themes)
Grethel et al. (2023)	N = 27	USA	Individuals aged 40–70 who had received DNA test results revealing an unexpected biological parent	To describe the experiences of individuals who received direct-to-consumer DNA test results indicating unexpected parentage	Qualitative— interviews	1. Initial discovery: -Shock, fear, crisis, and loss of genetic relatedness. 2. Identity exploration: -Encompassing anxiety, emotional challenges, determination to conduct genealogical research, and confronting family. 3. Identity reconstruction (personal, community, racial/ethnic, etc.): -Due to new familial connections and reconciliation of personal and familial history. 4. Identity synthesis and shift in worldview: -Had a resounding impact on participants' overall worldviews.
Hunt (2022)	N = 30	USA	Adults aged 30–68 who have taken an at-home genetic test for health or ancestry	To understand how the widespread use and advertising of DTC testing shapes individual attitudes towards the biological basis of racial classification	Mixed-methods- interviews, survey	 Motivations for DNA testing: To understand the origins of one's identity. Impacts on racial and ethnic identity: Whites: Deconstructing Whiteness: there was a social deconstruction of whiteness that is experienced through racial projects of genetic testing. Impacts on racial and ethnic identity: Multiracial/ethnic individuals: Lived experiences shaped by discrimination, exclusion, or intolerance were described; Often felt limited by institutional boundaries as institutional and individual understandings of racial identity are often misaligned.
Kramer (2011)	N = 219	UK	Volunteers aged 31–80+ who write anonymously about aspects of their everyday life	To explore the role of genealogy in personal lives from the perspective of genealogists and non-genealogists	Qualitative	Genealogy serves at least three major uses in personal life: 1. To map connectedness through blood; 2. Genealogy—and ancestry—are used as a resource for identity work; 3. Genealogy allows for belonging in time and connectedness across the generations, as well as belonging in new, or newly reconfigured places of significance.

Table A1. Cont.

Authors(s)/Year	Study Population/ Sample Size	Country	Study Participants	Aims/Purpose	Study Design, Data Collection Methods	Key Findings (Based on Research Questions and Themes)
Lawton et al. (2023)	N = 605	USA	Facebook support group for individuals with a misattributed parentage experience-MPE; at least 18 years of age	To explore how individuals are affected by the revelation of an unexpected parent.	Online survey—includes both quantitative and qualitative data	1. Impacts on family relationships resulting from an MPE: -Adoptees were less likely to tell the mothers who raised them about their MPE discovery compared to other communities (i.e., adoptees, assisted conception, nonpaternal event, rape/assault); -For adoptees and assisted conception respondents, sharing their MPE news did not impact their family relationships as much; -All groups were more likely to share their MPE with the mothers who raised them, but more positive impacts on their relationships with the fathers who raised them. 2. Impacts on identity and attitudes arising from an MPE: -There were significant differences among MPE groups in terms of whether their identity changed a lot, with adoptees less likely to state that their identities were impacted; -76% felt that they understand themselves better; -24% felt that the discovery made them feel worse about themselves. 3. Medical history and resource use: -Only 39% sought help from a licensed mental health professional, with more assisted conception and rape/assault groups seeking help.
Lee et al. (2021)	N = 117	USA	Adoptees aged 18–77, who were adopted domestically or internationally as a child by a family from the US	To examine adult adoptees' motivations to purse direct-to-consumer genetic testing (DTC-GT), experiences completing a test, and reasons for not completing one.	Quantitative—online survey	-Adoptees were motivated to use DTC-GT to search for biological family (83.0%), verify race and ethnicity (72.3%), and find out where ancestors came from (66.0%); -Adoptees are using DTC-GT to search for biological relatives, confirm their ethnicity and ancestry, and gain information about their health.
Moore (2023)	N = 775	Australia	Australian citizens or residents, aged 21–93, who self-described as amateur (or hobbyist) family historians	To chart the extent and nature of negative emotions among family historians, and profile those most vulnerable to distress	Quantitative—online survey	-Those more likely to experience negative emotions were younger, female, more engaged with their hobby, more likely to have half-siblings, more driven by the motive to understand themselves better, more open to experience, and less emotionally stableThose who discover that their biological identity is not what they had been led to believe are more at risk of strong emotions (e.g., feelings of betrayal, sadness)There were no significant differences between adopted and nonadopted (or donor-conceived) people who felt negative feeling (possibly due to a small sample size of the study).

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Table A1. Cont.

Authors(s)/Year	Study Population/ Sample Size	Country	Study Participants	Aims/Purpose	Study Design, Data Collection Methods	Key Findings (Based on Research Questions and Themes)
Morstead and DeLongis (2023)	N = 433	Canada	Individuals aged 15–89 who had previously undergone DTC genetic testing or if they intended to do so in the future	To examine the motivation to uncover family secrets via pursuit of DTC genetic testing and identify potential roles of self-concept clarity and adverse childhood experiences	Quantitative—online survey	-Most frequent reasons for testing included curiosity about racial/ethnic ancestry (58%), genealogical research (55%), and scientific interest (52%); "family secret motive" (14%); -Exposure to adverse childhood experiences (ACE) and lower self-concept clarity (SCC) was associated with the motivation to pursue DTC genetic testing for the purpose of uncovering family secrets; -Evidence of a direct effect for ACE but an indirect effect for SCC given their associations to impaired identity formation processes.
Nelson et al. (2019)	Interviews: N = 10, Survey: N = 1137, Follow-up interviews: N = 10	USA	Third-party interpretation (TPI) tool developers and DTC genetic testing customers, aged 18–84	To understand how the growing access to uninterpreted genetic data and various means to interpret it may unfold	Mixed methods—survey, interview	-The most common motivations for pursuing DTC testing were general curiosity about genetic makeup and curiosity about ancestry; -Less common motivations were limited information about family health history and other family members pursuing testing.
Newton et al. (2023)	N = 91 (survey), $N = 28$ (interviews)	Australia	Australian donor-conceived adults, aged 16–49	To explore how DNA test results reflect genetic narratives that sit with other forms of identity information (e.g., such as familial narratives)	Mixed methods—survey, interviews	 Truth (how DNA results disrupted ontological security and promoted confrontation): -DNA results prompted processes of confrontation to verify the "truth" about their conception. Proof (how DNA testing was valued and legitimized, especially compared with medical records): -DNA testing often represented a significant source of information and hope (compared to health organization with very restricted access to their medical records). Sleuth (how DNA testing was leveraged in agentive practices): -DNA testing was legitimized, and recommended within the peer networks in which experiential knowledge was shared.
Parham (2008)	Meetings/workshops of a St Domingue Special Interest Group (SIG) at conferences, organized by the Louisiana Creole Research Association (LA Creole)	USA	Individuals with Louisiana roots who are descended from refugees of eighteenth and nineteenth century St Domingue/Haiti, ages not provided	To illustrate how the shared history of the multiracial descendants of eighteenth and nineteenth century St Domingue/Haiti in Louisiana is encountered in racially distinct ways	Qualitative— participant observation, field work, interviews, stories	-The process of engaging in family history research provides an opening for some participants to better understand others across racial and ethnic divides. -Cross-racial dialogue was limited by the organization of family history activities into racially distinct social networks. -One way to foster the sharing of experiences and assumptions is to provide opportunities for cross-over between family history networks.

Table A1. Cont.

Authors(s)/Year	Study Population/ Sample Size	Country	Study Participants	Aims/Purpose	Study Design, Data Collection Methods	Key Findings (Based on Research Questions and Themes)
Peters (2022)	N = 38	USA	Black Americans aged 25–68 and over who have taken genetic ancestry tests (GATs)	To examine how genetic ancestry tests (GATs) influence the way Blackness is defined, communicated, and negotiated.	Qualitative—focus groups, interviews, narratives, autoethnographic account	-This study reveals how GATs and their surrounding discourses are used to sustain, resist, and negotiate dominant ideologies of Whiteness that re-entrench meanings of Blackness within science and industry logics; how GATs influence African diasporic racial identities and definitions of Blackness.
Reiser (2012)	N = 16	USA	College students searching their own personal ancestry	To examine the experience of searching one's genealogy and the impact it might have on college student development	Qualitative— interviews	Participants reported that researching their family history (a) ignited or intensified a strong interest in genealogical research; b) developed connections, closeness, and bonds to ancestors which motivated them in their lives; (c) discovered shared physical and personality characteristics; (d) impacted their current relationships with living relatives; (e) stimulated spiritual experiences; and (f) influenced their identity development
Roth and Ivemark (2018)	N = 100	USA	Individuals (median age 58) who have taken at least one genetic ancestry test	To develop the genetic options theory to account for how genetic ancestry tests influence consumers' ethnic and racial identities	Qualitative— interviews	-Most used tests to narrow/direct archival genealogical research or to connect with "genetic cousins" and to fill in branches of the family tree. -Variations in changes over time in geneticized racial identities and explorations of identity. -Consumers choose selectively from the estimates according to two mechanisms (1) identity aspirations, (2) social appraisals. -Consumers' prior racialization influences their aspirations: White respondents aspired to new identities more readily and in substantively different ways.
Rubanovich et al. (2021)	N = 322	USA	Individuals aged 22–81 who enrolled in the Scripps Genomic Health Initiative (SGHI)	To examine DTC test impacts on recipients	Quantitative—survey	-A notable number of respondents indicated that their DNA ancestry results affected their cultural/personal identityMost (61.2%)participants reported at least one advantage to receive ancestry results, 12.1% reported at least one disadvantage. e.g., Advantages: test results satisfied a natural curiosity, help to confirm what was already known or suspected about their identity, learning heritage-related information, providing potential health insights. e.g., Disadvantages: receiving unwelcome/unexpected information, a lack of utility, skepticism of the trustworthiness or accuracy of the results.

Table A1. Cont.

Authors(s)/Year	Study Population/ Sample Size	Country	Study Participants	Aims/Purpose	Study Design, Data Collection Methods	Key Findings (Based on Research Questions and Themes)
Smith (2008)	N = 22	USA	Women aged from 32 to 82.	To explore the connection between women and genealogy by examining the ways inherited familial narratives/data work to position women within American culture.	Qualitative— interviews	Two themes: women's positioning within families and genealogical communities, familial connections. Seven categories: (a) motivation to conduct genealogical research, (b) knowing one's ancestors, (c) tracing race/class/fame via genealogy, (d) sociohistorical positioning of women, (e) role of women in family systems, and (f) the role of women within genealogical communities
Sonn et al. (2014)	N = 9	Australia	Melbourne-based young people aged 16–28	To support people to claim a personally meaningful Australian identity	Qualitative—oral history theatre methodology (storytelling, web-based archive, interviews)	Through an oral history theatre project, participants developed new understanding of their own social identities, and meaning of and possibilities for belonging. Two key outcomes: (1) "Centring diverse lives, decentring whiteness", (2) "a different starting point: Aboriginal ways of knowing".
Stallard and de Stallard and de Groot (2020)	N = 114	UK	Family historians (predominantly retired women) with an interest in genetic genealogy	(1) To explore how DNA and genetic genealogies are changing family history practice (2) To illustrate how it is enabling users to develop genuinely new ways of approaching the past	Qualitative—focus groups	-DNA enables new connections to the past: direct impact of genetic evidence on extending the scope of family history researchDNA testing offers an appealing and often successful way to broaden engagement with genealogical research, with many researchers encouraging other family members to undertake DNA tests in order to understand the complexity of their descent and to make more genetic matches and thus generate new genealogical findings.
Strand and Källén (2021)	N = 14	Sweden	Root-seeking individuals aged 33–76 who claim ancestral connections to Vikings and refer to genetic ancestry tests—GATs—in order to prove these connections	To understand how the fulfilled desire to "be a Viking" is articulated through discourses around Vikings and DNA	Qualitative— interviews	-GAT customers use some genetic information but also discard; personal interpretations also used to construct Viking identitiesGAT consumers, by taking advantage of the sematic elasticity of the Viking figure, appropriate sociohistorically constructed ideas about "berserkers", "explorers", or "entrepreneurs" in order to rationalize their own livesThe figure of the Viking has a strong discursive attachment to the notion of whiteness, root-seekers who claim Viking roots indirectly claim a kind of whiteness for themselves.
Straughn (2023)	N = 11	USA	Adoptees aged 26–59 who have received the test results of a personal genomic testing (PGT) kits	To understand the experience of adoptees who have utilized these kits.	Qualitative— interviews	-The information-seeking process was difficult (e.g., barriers due to cost, institutional, the adopted family), emotional and required preparation and support, possibly from adoption-competent therapistsPGT kits frequently led to the discovery and changes in ethnic identity, information on new birth relatives, and for some, the information-seeking process was related to the experience of adoption being traumatic.

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Table A1. Cont.

Authors(s)/Year	Study Population/ Sample Size	Country	Study Participants	Aims/Purpose	Study Design, Data Collection Methods	Key Findings (Based on Research Questions and Themes)
Sweeny and Legg (2011)	N = 99	USA	Adults aged 19–78 (M = 37.3) who were recruited through web advertisements	To examine predictors of interest in DTC genetic testing	Quantitative—survey	-Participants who received positive information perceived the greatest benefits of testing and the fewest barriersParticipants who received positive information anticipated the greatest regret over missing the opportunity to testPeople who read both positive and negative information did not differ from people who read only negative information in their intentions to pursue testing.
Theunissen (2022)	N = 16	New Zealand	Individuals who completed a DNA test and received their results, or would be receiving their results (ages not provided)	To explore the effects of DNA testing	Qualitative— interviews	-Notions of family were frequently challenged with unexpected DNA test results causing shifts in personal and social identities, especially in their family and biological identitiesDiscrepancies in DNA test results prompted re-negotiation of these identities and affected their feelings of belonging to their perceived social groups.
Yin et al. (2020)	19,744 posts published by 2562 Reddit users and 138,008 posts published by 14,983 Reddit users	USA	Data from the from the r/23andme and r/AncestryDNA subreddits through the official Reddit Application Programming Interface (ages not provided)	(1) To characterize what people experienced, discussed, and cared about regarding direct-to-consumer genetic testing (DTC-GT) (2) To examine how these topics changed over time, corelated with contemporaneous events	Latent Dirichlet allocation (LDA)	-The topics discussed by the Reddit users align with the services offered by the DTC-GT companiesThe observed posting trends in both subreddits clearly reflect the impact of consumer marketingThe inferred themes of ancestral origin and kinship/feelings were the two most frequently discussed, while discussions about the health risks theme focused primarily on submitting DTC-GT raw data to third parties for interpretationThe kinship/feelings theme exhibited the largest range of emotional response: some people became excited because they found their biological parents or other kin, while others became upset because they unexpectedly found that their parents or other kin were not biologically related to them.

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