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DNA Testing in Determining the Lineage of Children Born Out of Wedlock: A Maqāṣid al-Sharī'ah Perspective

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Abstract

The determination of lineage (*nasab*) for children born out of wedlock remains a contested issue in Islamic family law, particularly regarding the admissibility of DNA testing as legal evidence. This study examines the legal position of DNA testing in determining the lineage of children born out of wedlock and analyzes its implications from the perspective of *maqāṣid al-sharī'ah*. This study employed normative legal research with descriptive-analytical characteristics using conceptual, statutory, and comparative approaches. Data were collected through library research and analyzed qualitatively using inductive-deductive reasoning. The findings reveal that DNA testing possesses strong scientific validity in establishing biological relationships and may function as corroborative evidence in lineage determination. However, within Islamic law, DNA testing cannot independently establish *nasab shar'i*, as legal lineage remains contingent upon lawful marriage. From the perspective of *maqāṣid al-sharī'ah*, DNA testing supports the realization of *ḥifẓ al-nasl* (protection of lineage), *ḥifẓ al-nafs* (protection of life), and *ḥifẓ al-ird* (protection of dignity) by ensuring biological certainty, protecting children's rights, reducing social stigma, and strengthening parental responsibility. Nevertheless, its application also presents potential risks, including genetic data misuse, privacy violations, and family conflict. This study concludes that the benefits of DNA testing outweigh its potential harms, provided that its implementation remains limited, legally regulated, and accompanied by strict protection of personal genetic data. Therefore, DNA testing should be positioned as a modern evidentiary instrument that supports the realization of *maqāṣid al-sharī'ah* without replacing the legal requirements of lineage recognized in Islamic law.

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Introduction

The issue of determining the lineage (*nasab*) of children born out of wedlock remains one of the most debated issues in Islamic family law, particularly in relation to legal recognition, civil rights, and social protection. Within both Islamic legal discourse and Indonesian positive law, the legal status of children born outside lawful marriage continues to generate complex legal and ethical debates (Manan, 2008). Lineage in Islamic law is not merely a biological matter; rather, it serves as the foundation for various legal consequences, including guardianship, inheritance, maintenance, and family identity (al-Zuhaili, 1997).

In the Indonesian legal framework, Article 43 paragraph (1) of Law Number 1 of 1974 on Marriage originally stipulated that children born outside lawful marriage have civil relations only with their mother and the mother's family. This provision significantly limited the legal rights of children born out of wedlock, particularly regarding paternal recognition, inheritance rights, and financial support (Syarifuddin et al., 2014).

A significant legal development occurred through Constitutional Court Decision Number 46/PUU-VIII/2010, which reinterpreted Article 43 paragraph (1) and expanded the civil relationship of children born out of wedlock to include their biological fathers, provided such relationships can be proven through science and technology and/or other legal evidence (Mahkamah Konstitusi Republik Indonesia, 2012). This decision opened legal space for the use of DNA testing as scientific evidence in determining biological relationships. Nevertheless, the position of DNA testing in determining lineage remains contentious, particularly when examined through Islamic law (Rofiq, 2015).

DNA testing has emerged as one of the most reliable scientific methods for identifying biological relationships. With a high degree of accuracy in paternity testing, DNA evidence is widely recognized as a credible scientific tool in legal proceedings involving parentage disputes, child recognition, inheritance, and guardianship (Ibn Qayyim al-Jawziyyah, 2002; Mustika, 2013). In several Muslim-majority legal contexts, DNA testing has increasingly been discussed as an evidentiary instrument in family law cases involving lineage determination and identity verification (Mustika, 2013).

However, the use of DNA testing in determining lineage continues to generate debate among contemporary Muslim scholars. Some scholars argue that DNA testing may be accepted as supporting evidence because it aligns with scientific advancement and contributes to legal certainty in establishing biological relationships (al-Qaradawi, 2000). In contrast, other scholars maintain that lineage determination must remain grounded in classical Islamic legal mechanisms, namely lawful marriage (*al-firāsh*), acknowledgment (*iqrār*), and legal testimony (*bayyinah*) (Djubaedah, 2010). From this perspective, DNA testing cannot independently establish *nasab sharī*, particularly in cases involving children born from unlawful relationships.

To address this debate comprehensively, an analytical framework is needed that goes beyond the textual boundaries of classical fiqh and considers the broader objectives of Islamic law. In this regard, *maqāṣid al-sharī'ah* offers a relevant and dynamic framework for examining contemporary legal issues. Al-Shāṭibī defines *maqāṣid al-sharī'ah* as the objectives embedded in Islamic legal rulings for the realization of human welfare in this world and the hereafter (al-Syathibi, 1997). Contemporary scholars, particularly Jasser Auda, further develop *maqāṣid al-sharī'ah* as a flexible and contextual framework capable

of addressing modern legal challenges arising from scientific and technological advancement (Auda, 2008).

In the context of lineage determination for children born out of wedlock, the *maqāṣid al-sharī'ah* approach is highly relevant because lineage protection constitutes one of the fundamental objectives of Islamic law, namely *ḥifẓ al-nasl* (Ibn Ashur, 2001). Protection of lineage extends beyond administrative recognition and encompasses the protection of children's rights, dignity, social status, and welfare (Zein, 2010). Therefore, the use of DNA testing may be understood not merely as a scientific innovation but also as a legal instrument capable of contributing to the realization of *ḥifẓ al-nasl*, *ḥifẓ al-nafs*, and *ḥifẓ al-'ird*.

Although previous studies have examined the legal status of DNA testing in Islamic law and the implications of Constitutional Court Decision Number 46/PUU-VIII/2010, most studies remain limited either to normative fiqh discussions or to positive legal analysis (Nasution, 2009; Irfan, 2012; Wahyuni, 2013). Few studies have comprehensively integrated scientific evidence, Islamic legal doctrine, and *maqāṣid al-sharī'ah* within a single analytical framework. This gap highlights the need for a more comprehensive and integrative study.

This study seeks to address this gap by examining the legal position of DNA testing in determining the lineage of children born out of wedlock and analyzing its implications from the perspective of *maqāṣid al-sharī'ah*. The study contributes theoretically to the development of Islamic family law discourse in response to scientific advancement and provides practical insights for judges, policymakers, and legal practitioners in addressing lineage-related disputes involving children born out of wedlock

Method

This study employed normative legal research with descriptive-analytical characteristics. Normative legal research was selected because this study focuses on examining legal norms, doctrines, and principles concerning lineage (*nasab*) determination for children born out of wedlock, particularly regarding the admissibility of DNA testing in Islamic family law (Soekanto & Mamudji, 2015; Ibrahim, 2006). This approach is appropriate for analyzing legal issues through statutory regulations, legal doctrines, and judicial decisions.

This study applied three approaches. First, the conceptual approach was used to examine the concepts of *nasab*, DNA testing, and *maqāṣid al-sharī'ah*. Second, the statutory approach was employed to analyze relevant legal instruments, including Law Number 1 of 1974 on Marriage, the Compilation of Islamic Law, Law Number 27 of 2022 on Personal Data Protection, and Constitutional Court Decision Number 46/PUU-VIII/2010. Third, the comparative approach was applied to compare the views of classical and contemporary Muslim scholars, as well as institutional fatwas concerning the use of DNA testing in lineage determination (Marzuki, 2017).

This study utilized three categories of legal materials. Primary legal materials consisted of the Qur'an, Hadith, classical fiqh literature, statutory regulations, fatwas, and court decisions related to lineage determination. Secondary legal materials included scholarly books, peer-reviewed journal articles, and previous relevant studies concerning Islamic family law, DNA testing, and *maqāṣid al-sharī'ah*. Meanwhile, tertiary legal materials

consisted of legal dictionaries, encyclopedias, and supporting reference materials relevant to this study.

Data were collected through library research by systematically reviewing legal documents, academic publications, scientific journals, and relevant literature related to DNA testing, lineage determination, and *maqāṣid al-sharī'ah* (Sunggono, 2016).

The collected data were analyzed qualitatively using descriptive-analytical methods through three stages: data reduction, interpretation, and conclusion drawing. The analysis employed inductive-deductive reasoning to formulate a comprehensive understanding of the legal position of DNA testing in determining lineage, both from the perspective of Islamic law and *maqāṣid al-sharī'ah* (Ibrahim, 2006). This analytical framework enabled the study to critically assess the relevance of scientific evidence in relation to the normative principles of Islamic family law.

Results

The Concept of Lineage in Islamic Law and Its Significance for Child Status

Terminologically, lineage (*nasab*) in Islamic jurisprudence refers to the legal and biological relationship that connects an individual to his or her family through blood ties and hereditary continuity. This relationship serves as the foundation of family structure and establishes legal rights and obligations among family members (Situbondo, 2024). Lineage is not merely a biological connection but also carries significant legal implications, including rights related to childcare (*ḥaḍānah*), guardianship (*wilāyah*), maintenance (*nafāqah*), and inheritance rights between parents and children (Juliansyahzen, 2013). Consequently, lineage functions as the primary determinant of a child's legal identity within both family and society.

The normative basis for maintaining clear lineage is firmly established in Islamic sources. The Qur'an emphasizes the importance of preserving biological identity, including the command to call adopted children by the names of their biological fathers as an expression of justice and clarity of lineage (Q.S. al-Aḥzāb [33]: 4–5). Similarly, Q.S. al-Furqān [25]: 54 highlights that Allah created human beings and established kinship and lineage among them through lawful relationships. These principles align with the doctrine of *maqāṣid al-sharī'ah*, particularly *ḥifz al-nasl* (protection of lineage), which classical scholars identify as one of the five essential objectives of Islamic law (Fahmi & Firdaus, n.d.).

The strong emphasis placed on lineage in Islamic law can be understood from two perspectives. First, from the individual perspective, lineage ensures legal certainty regarding a child's rights, identity, and protection. Second, from the social perspective, lineage functions as a mechanism for preserving family order and social stability. This explains why Islamic law establishes several preventive mechanisms, such as the prohibition of adultery (*zinā*), sanctions for false accusations of adultery (*qadf*), the procedure of *li'ān*, and waiting periods (*'iddah*), all of which aim to preserve clarity in lineage and prevent legal confusion concerning familial relationships.

Determination of Lineage in Classical Islamic Jurisprudence

Classical Islamic jurisprudence recognizes four primary methods for establishing lineage: lawful marriage (*al-firāsh*), acknowledgment (*al-iqrār*), legal testimony (*al-*

bayyinah), and physical resemblance analysis (*al-qiyāfah*) (Situbondo, 2024). Among these methods, lawful marriage is universally regarded by Muslim jurists as the strongest basis for establishing lineage. A child born within a valid marriage is automatically attributed to the husband without requiring additional proof.

Meanwhile, *al-qiyāfah*, which refers to the expertise of identifying biological relationships based on physical resemblance, is recognized by the majority of classical jurists, except for the Ḥanafī school. This method was historically accepted based on prophetic traditions acknowledging the observations of experts capable of identifying similarities between individuals through physical characteristics (Walisongobangkit, 2024). Although accepted in classical legal discourse, *al-qiyāfah* remains inherently limited due to its reliance on subjective human observation.

The legal status of children born outside lawful marriage has been a major concern in classical Islamic legal discourse. The majority of jurists from the Shāfi‘ī and Ḥanbalī schools maintain that children born from unlawful sexual relationships cannot be legally attributed to the biological father, even if the biological connection is certain (Dunggio, 2021). This position is primarily based on the Prophetic tradition stating that “the child belongs to the owner of the bed (*al-firāsh*), and the adulterer receives nothing.” Accordingly, lineage is legally linked to the lawful marital relationship rather than merely to biological connection.

However, some jurists offered more nuanced views. Abū Ḥanīfah, for instance, contributed important legal reasoning concerning lineage, guardianship, and marriage compatibility (*kafā’ah*) within Islamic family law (Juliansyahzen, 2013). Certain juristic opinions also allow limited possibilities for attributing lineage to a biological father if he subsequently marries the child’s mother and the child is born within that marital framework, provided there is no legal denial (*nafy*) by relevant parties (Anwar, 2023).

The majority’s rejection of attributing lineage of children born from *zinā* to biological fathers can be understood as a preventive legal mechanism (*sadd al-dharī’ah*) intended to prevent adultery from acquiring legal legitimacy equivalent to lawful marriage. Such a legal position reinforces marriage as the sole legitimate institution for establishing lineage. It is also important to note that these classical legal formulations emerged in historical contexts where biological proof relied solely on methods such as *al-qiyāfah*, which lacked scientific precision and carried substantial risk of error. Consequently, classical jurists prioritized formal legal certainty through marriage over biological evidence, which at that time remained scientifically unreliable.

DNA Testing as Scientific Evidence in Lineage Determination

DNA (Deoxyribonucleic Acid) testing is a scientific method used to analyze genetic material for the purpose of identifying biological relationships between individuals. As genetic material carries hereditary information transmitted from parents to offspring, DNA testing has become one of the most reliable scientific tools for determining biological kinship (Muhtarom, 2009). Technically, DNA testing involves several laboratory procedures, including sample collection, DNA extraction, amplification, and genetic profile analysis, all of which must be conducted under standardized forensic procedures and interpreted by qualified experts (Fuady, 2012).

The accuracy of DNA testing in establishing biological relationships, particularly paternity, is exceptionally high. In paternity disputes, DNA testing can achieve accuracy rates exceeding 99 percent, making it one of the most credible forms of scientific evidence in modern legal proceedings. Furthermore, DNA testing can also provide near-conclusive certainty in excluding biological relationships, thereby serving both confirmatory and exculpatory functions in legal disputes. This scientific reliability has made DNA testing increasingly relevant in legal cases involving child recognition, guardianship, inheritance disputes, and family law matters.

Compared to classical methods of lineage determination in Islamic jurisprudence, DNA testing may be understood as a modern extension of *al-qiyāfah*. Both methods aim to identify biological relationships between individuals; however, while *al-qiyāfah* relies on physical resemblance and human observation, DNA testing relies on objective genetic analysis with significantly higher precision and reliability. Due to its scientific accuracy, some contemporary scholars consider DNA testing as a modern form of *bayyinah* (legal evidence), offering a level of certainty that often exceeds traditional testimonial evidence, which may be affected by human error or subjectivity.

Nevertheless, despite its strong scientific validity, DNA testing does not automatically replace traditional legal mechanisms in Islamic law. Rather, it should be understood as a supporting evidentiary tool that strengthens the process of determining biological relationships. In this sense, DNA testing offers a highly reliable scientific mechanism for identifying biological lineage without necessarily displacing the legal authority of lawful marriage (*al-firāsh*) as the primary basis for establishing *nasab shar'i* in Islamic jurisprudence.

Recognition of DNA Testing in Contemporary Islamic Law and Indonesian Positive Law

Among contemporary Muslim scholars, the use of DNA testing in lineage determination has generated diverse legal opinions, particularly concerning cases involving disputed lineage, *li'ān*, and children born outside lawful marriage. Some contemporary scholars acknowledge DNA testing as a legitimate scientific tool that may assist in resolving lineage disputes, particularly in cases where lineage remains uncertain. Yūsuf al-Qaradāwī, for instance, recognizes the evidentiary value of DNA testing as a scientific instrument capable of supporting legal certainty in lineage-related disputes (Imanuddin, 2019).

At the institutional level, international Islamic legal bodies have also addressed the admissibility of DNA testing in lineage determination. The Islamic Fiqh Academy (*al-Majma' al-Fiqhī*) under *Rābiṭah al-Ālam al-Islāmī* permits the use of DNA testing in limited circumstances, particularly in cases where lineage remains unclear and requires scientific verification. However, this permissibility is accompanied by significant restrictions. DNA testing is generally accepted as supporting evidence in establishing lineage (*itsbāt al-nasab*), but it is not recognized as an independent basis for negating lineage (*nafy al-nasab*) when lineage has already been legally established through lawful marriage. In such cases, classical procedures such as *li'ān* remain the only valid legal mechanism under Islamic law (LTN PBNU, 2010).

A similar cautious approach can be observed in Indonesian Islamic legal discourse. The decisions of *Bahtsul Masail* within Nahdlatul Ulama indicate that DNA testing may serve

as supporting evidence in lineage disputes, yet its evidentiary authority remains limited and cannot override established principles of Islamic family law. This position reflects an effort to balance scientific advancement with the preservation of classical legal principles governing lineage.

Within Indonesian positive law, the legal significance of DNA testing increased substantially following Constitutional Court Decision Number 46/PUU-VIII/2010. This landmark ruling reinterpreted Article 43 paragraph (1) of Law Number 1 of 1974 on Marriage by recognizing that children born outside lawful marriage may establish civil relations not only with their mothers but also with their biological fathers, provided such relationships can be proven through science and technology or other legally recognized evidence (Mahkamah Konstitusi Republik Indonesia, 2012). This ruling explicitly opened legal space for DNA testing to function as scientific evidence in disputes involving lineage, civil status, and inheritance rights.

In response to this legal development, the Indonesian Council of Ulama (*Majelis Ulama Indonesia* / MUI) issued Fatwa Number 11 of 2012 concerning the legal status of children born from adultery. The fatwa affirms that children born from unlawful relationships maintain lineage, guardianship, inheritance, and maintenance rights only through their mothers and maternal families. Meanwhile, biological fathers bear moral and financial responsibilities toward such children through mechanisms outside formal inheritance law (Majelis Ulama Indonesia, 2012). This position illustrates an ongoing normative tension between Indonesian positive law, which increasingly accommodates scientific evidence in establishing biological relationships, and Islamic legal doctrine, which continues to emphasize lawful marriage as the primary basis for establishing *nasab shar'i*.

In judicial practice, DNA testing is generally not treated as stand-alone evidence in lineage disputes. Rather, it functions as supporting or corroborative evidence that must be complemented by other forms of legal proof, including witness testimony, acknowledgment, or documentary evidence. This development reflects a gradual shift in evidentiary paradigms—from exclusive reliance on formal legal proof toward limited recognition of scientific evidence—while preserving the normative boundaries established in Islamic law.

Analysis of the Legal Position of DNA Testing in Determining the Lineage of Children Born Out of Wedlock

Based on the synthesis of classical and contemporary Islamic legal perspectives, this study finds that the scientific validity of DNA testing in establishing biological relationships is highly reliable and generally undisputed. Due to its exceptionally high accuracy, DNA testing provides strong scientific certainty in identifying biological parentage. However, scientific certainty does not automatically translate into legal certainty within Islamic law. This distinction arises because Islamic jurisprudence differentiates fundamentally between biological lineage and *nasab shar'i*.

Biological lineage refers to the genetic relationship between a child and biological parents based on blood ties. In contrast, *nasab shar'i* refers to legally recognized lineage established through lawful marriage and accompanied by legal consequences such as inheritance rights, guardianship, maintenance obligations, and family identity. Therefore,

although DNA testing may conclusively prove biological paternity, such proof alone is insufficient to establish *nasab shar'i* in cases involving children born out of wedlock.

Based on this distinction, the legal position of DNA testing in Islamic law may be formulated in three main categories. First, DNA testing is widely acceptable as supporting evidence (*qarīnah*) in establishing lineage (*itsbāt al-nasab*), particularly in cases where lineage remains unclear (*majhūl*), such as disputes involving switched infants, disputed paternity claims, or uncertain parentage. In such cases, DNA testing serves as a valuable scientific tool for strengthening legal certainty.

Second, DNA testing may be utilized in lineage negation (*nafy al-nasab*) under limited circumstances. However, its use remains subject to strict legal restrictions and does not replace *li'ān* as the only recognized Islamic legal mechanism for negating lineage within a lawful marriage. Thus, scientific evidence may support legal deliberation but cannot override established Islamic legal procedures.

Third, DNA testing cannot serve as an independent basis for establishing new *nasab shar'i* between children born from unlawful sexual relationships and their biological fathers. Recognizing biological evidence alone as sufficient for establishing legal lineage would blur the distinction between lawful and unlawful relationships and potentially weaken the protective function of marriage as the sole legitimate institution for lineage formation in Islamic law.

These findings indicate that DNA testing should be positioned as a modern evidentiary instrument with complementary rather than primary authority. In other words, DNA testing functions as corroborative evidence rather than stand-alone evidence in determining lineage within Islamic legal discourse. Such a position reflects a balanced approach that acknowledges scientific advancement while preserving the normative foundations of Islamic family law.

This legal formulation is consistent with the broader objectives of *maqāṣid al-sharī'ah*, particularly *hifẓ al-nasl*, which seeks to ensure legal certainty in lineage while simultaneously preserving the integrity of marriage as the only legitimate framework for establishing *nasab shar'i*. Therefore, this study concludes that the legal position of DNA testing in determining the lineage of children born out of wedlock is instrumental, limited, and complementary: scientifically strong, yet normatively constrained by the principles of Islamic law.

Discussion

Maqāṣid al-Sharī'ah as an Analytical Framework in Contemporary Islamic Law

Etymologically, *maqāṣid* is the plural form of *maqṣūd*, derived from the Arabic root *qaṣada*, meaning purpose, objective, or intention. Meanwhile, *sharī'ah* linguistically refers to a path leading to the source of life. Terminologically, *maqāṣid al-sharī'ah* refers to the objectives and wisdom underlying Islamic legal rulings, all of which are directed toward realizing human welfare (*maṣlahah*) in both worldly and spiritual dimensions. Classical scholars consistently emphasize that Islamic law is fundamentally designed to secure human benefit and prevent harm.

Among the most influential formulations of *maqāṣid al-sharī'ah* is that of al-Shāṭibī, who argued in *al-Muwāfaqāt* that all legal rulings in Islam are ultimately intended to preserve human welfare (*al-aḥkām musyarra'ah li maṣāliḥ al-'ibād*) (al-Syathibi, 1997). According to

al-Shāṭibī, the objectives of Islamic law revolve around protecting five essential values: religion (*ḥifẓ al-dīn*), life (*ḥifẓ al-nafs*), intellect (*ḥifẓ al-‘aql*), lineage (*ḥifẓ al-nasl*), and property (*ḥifẓ al-māl*). These five essential protections form the foundational structure of Islamic legal philosophy.

In contemporary Islamic legal thought, Jasser Auda reconstructs classical *maqāṣid* theory through a systems approach that emphasizes flexibility, contextual interpretation, and multidimensional analysis. Auda criticizes classical legal methodologies for being overly textual, binary, and reductionist, often limiting legal reasoning to literal interpretations without adequately considering broader social realities (Auda, 2008). As an alternative, he proposes a dynamic framework based on interconnectedness, openness, multidimensionality, and purposefulness.

This contemporary understanding makes *maqāṣid al-sharī‘ah* highly relevant in addressing legal issues arising from scientific and technological advancement, including biotechnology and DNA testing. Since DNA testing was unknown in classical Islamic jurisprudence, its legal status cannot be assessed solely through textual analogies. Instead, it requires broader analysis concerning whether its use supports or threatens the realization of the fundamental objectives of Islamic law.

In the context of lineage determination, *maqāṣid al-sharī‘ah* provides a particularly relevant analytical lens because the issue directly relates to *ḥifẓ al-nasl*, while simultaneously intersecting with *ḥifẓ al-nafs* and *ḥifẓ al-‘ird*. Therefore, evaluating DNA testing through this framework enables a more comprehensive understanding of its legal and ethical implications in contemporary Islamic family law.

DNA Testing from the Perspective of Ḥifẓ al-Nasl (Protection of Lineage)

Among the fundamental objectives of Islamic law, *ḥifẓ al-nasl* occupies a central position in Islamic family law. Ibn ‘Ashūr explains that the concept of *ḥifẓ al-nasl* should not be narrowly understood as merely preserving genealogical lineage (*ḥifẓ al-nasab*), but rather as encompassing broader dimensions, including the continuity of human generations, the preservation of family identity, and the protection of children’s rights and welfare (Ibn Ashur, 2001). In this broader framework, lineage protection involves not only biological continuity but also legal certainty regarding identity, family rights, and social recognition.

The findings of this study indicate that DNA testing significantly contributes to the realization of *ḥifẓ al-nasl* because of its capacity to establish biological relationships with a very high degree of scientific accuracy. By providing objective and reliable evidence, DNA testing reduces uncertainty in lineage-related disputes and strengthens legal certainty in cases involving contested biological relationships.

This contribution may be observed in at least two significant ways. First, DNA testing serves as an important mechanism for preventing errors in lineage identification. Cases involving switched infants, disputed parentage, or unclear biological origins can create severe legal and social consequences if left unresolved. In such cases, DNA testing functions as a corrective scientific tool capable of restoring legal clarity and ensuring that lineage is accurately determined.

Second, DNA testing may prevent biological fathers from denying responsibility toward children whose biological relationship can be scientifically established. This

becomes particularly relevant in contemporary legal contexts where biological fathers may avoid legal, financial, or moral responsibility. In Indonesia, Constitutional Court Decision Number 46/PUU-VIII/2010 reflects this development by opening legal avenues for children born outside lawful marriage to establish civil relationships with biological fathers through scientific evidence (Mahkamah Konstitusi Republik Indonesia, 2012). This legal shift strengthens child protection by reducing the possibility of paternal denial and promoting greater legal accountability.

From the perspective of *maqāṣid al-sharī'ah*, these findings suggest that DNA testing substantively supports the realization of *ḥifẓ al-nasl* because it enhances legal certainty regarding lineage and reduces the risk of prolonged disputes arising from uncertain biological relationships. However, this support remains instrumental rather than absolute. DNA testing contributes to lineage protection at the level of biological verification but does not replace lawful marriage as the primary legal foundation for establishing *nasab shar'ī*.

This distinction is crucial because Islamic law does not equate biological certainty with full legal legitimacy. While DNA testing can confirm biological parentage with strong scientific certainty, legal lineage in Islamic law remains fundamentally tied to lawful marital relationships. Therefore, the contribution of DNA testing to *ḥifẓ al-nasl* must be understood within these normative boundaries, balancing scientific advancement with the legal principles that preserve the institution of marriage and the legitimacy of lineage.

DNA Testing from the Perspective of Ḥifẓ al-Nafs and Ḥifẓ al-ʿIrd

In addition to its relevance to *ḥifẓ al-nasl*, the use of DNA testing in lineage determination is also closely related to *ḥifẓ al-nafs* (protection of life) and *ḥifẓ al-ʿird* (protection of dignity and honor). These two objectives are particularly important because disputes concerning lineage do not merely involve legal status but also deeply affect the psychological well-being, social dignity, and future welfare of children.

Within the framework of *maqāṣid al-sharī'ah*, *ḥifẓ al-nafs* extends beyond the protection of physical life to include psychological security, emotional stability, and overall human well-being. Meanwhile, *ḥifẓ al-ʿird* concerns the protection of personal dignity, honor, and social reputation. In the context of children born out of wedlock, both objectives become highly relevant, as unclear legal status often exposes children to social stigma, discrimination, and psychological harm.

The findings of this study indicate that uncertainty regarding lineage may generate serious negative consequences for children, particularly in societies where lineage remains strongly connected to social legitimacy and family identity. Children born outside lawful marriage often face discrimination, social exclusion, and negative labeling, all of which may affect their emotional development and social integration. Such conditions directly undermine both *ḥifẓ al-nafs* and *ḥifẓ al-ʿird*.

In the Indonesian context, these concerns were among the major considerations behind Constitutional Court Decision Number 46/PUU-VIII/2010, which aimed to provide legal protection and greater legal certainty for children born out of wedlock while reducing discriminatory treatment arising from unclear legal status (Mahkamah Konstitusi Republik Indonesia, 2012). This reflects a broader legal recognition that children should not bear the social consequences of circumstances beyond their control.

From this perspective, DNA testing contributes positively to the realization of *hifz al-nafs* and *hifz al-'ird* in several ways. First, DNA testing can reduce social stigma by providing objective scientific evidence of biological relationships, thereby strengthening legal recognition and social legitimacy. Second, legal clarity concerning biological identity may provide psychological security and emotional stability for children by reducing uncertainty regarding their origins. Third, DNA testing strengthens parental responsibility, particularly by encouraging biological fathers to fulfill financial, moral, and social obligations toward their children.

This finding suggests that DNA testing aligns with the principle of protecting the best interests of the child. The use of scientific evidence in lineage disputes may therefore serve as an important instrument for safeguarding children's dignity and welfare. However, such application must remain carefully regulated to ensure that DNA testing is used as a protective mechanism rather than as a tool for stigmatization, humiliation, or exploitation of vulnerable children and families.

Therefore, from the perspective of *hifz al-nafs* and *hifz al-'ird*, DNA testing may be viewed as a supportive legal instrument that contributes to protecting human dignity, reducing social harm, and promoting child welfare, provided its implementation remains guided by ethical principles and legal safeguards.

Maslahah and Mafsadah Considerations in the Use of DNA Testing

The use of DNA testing in lineage determination presents both significant benefits (*maslahah*) and potential harms (*mafsadah*), both of which must be carefully evaluated within the framework of *maqāṣid al-sharī'ah*. Islamic legal reasoning requires that contemporary legal instruments be assessed not only based on their practical utility but also on their broader implications for justice, welfare, and social order.

The findings of this study indicate that DNA testing offers several important benefits. First, it enhances legal certainty by providing highly accurate scientific evidence in disputes involving biological relationships. Given its strong reliability, DNA testing can significantly reduce ambiguity in lineage-related cases and improve judicial decision-making. Second, DNA testing strengthens child protection by enabling clearer legal recognition of biological relationships, which may support access to rights related to identity, financial support, and legal protection. Third, DNA testing promotes justice by protecting both vulnerable children and falsely accused individuals. It may help ensure that biological fathers fulfill their responsibilities while simultaneously protecting individuals from unfounded allegations of paternity.

Despite these substantial benefits, DNA testing also carries significant risks. One major concern involves the misuse of genetic data. Genetic information constitutes highly sensitive personal data, and unauthorized access or misuse may lead to privacy violations, discrimination, and serious harm to affected individuals. This concern is particularly relevant in Indonesia, where Law Number 27 of 2022 on Personal Data Protection explicitly recognizes genetic data as sensitive personal information requiring strict legal protection.

A second concern relates to the potential emergence of family conflict. DNA test results may reveal biological realities that contradict long-standing family assumptions, potentially disrupting family structures, marital relationships, and social harmony. In some cases, such revelations may trigger emotional distress, legal disputes, or broader familial

tensions. Third, DNA testing may create risks related to privacy and dignity, especially when sensitive genetic information is exposed or publicly misused in ways that harm individual reputation or social standing.

To assess these competing considerations, several Islamic legal maxims (*qawā'id fiqhīyyah*) provide useful guidance. First, the maxim *dar' al-mafāsīd muqaddam 'alā jalb al-maṣāliḥ* states that preventing harm should take priority over securing benefits. This principle emphasizes the need to minimize risks such as data misuse, privacy violations, and social conflict before broadly applying DNA testing in legal practice.

Second, the maxim *al-mashaqqah tajlib al-taysīr* suggests that hardship necessitates facilitation. In the context of lineage disputes, this principle supports the use of DNA testing as a practical legal solution in situations where traditional methods of proving lineage are insufficient or ineffective. Scientific evidence may therefore serve as a necessary legal facilitation in resolving complex disputes involving uncertain biological relationships.

Third, the maxim *al-ḥukmu yadūru ma'a al-maṣlaḥah* highlights that legal rulings should be closely connected to the realization of public welfare. This principle provides flexibility for Islamic legal reasoning to accommodate scientific developments such as DNA testing, provided their application demonstrably promotes justice and welfare while minimizing harm.

Based on these considerations, this study finds that the benefits of DNA testing generally outweigh its potential harms. However, this conclusion remains conditional. The positive contribution of DNA testing can only be realized when its application is limited to legitimate legal needs, supported by strict procedural regulations, and accompanied by strong protections for genetic privacy and personal dignity.

Therefore, DNA testing should be positioned as a complementary evidentiary instrument that supports the realization of *maqāṣid al-sharī'ah*, particularly in protecting lineage, human dignity, and child welfare, without undermining the fundamental principles of Islamic family law.

Conclusion

This study concludes that DNA testing occupies an instrumental and limited position in determining the lineage of children born out of wedlock within Islamic law. Although DNA testing possesses strong scientific validity and provides highly reliable evidence in establishing biological relationships, its scientific certainty does not automatically confer legal recognition as *nasab shar'ī*. Islamic law fundamentally distinguishes between biological lineage and legally recognized lineage, the latter of which remains contingent upon lawful marriage as the primary basis for legal legitimacy.

The findings of this study demonstrate that DNA testing may function in three main capacities. First, it serves as corroborative evidence in establishing lineage, particularly in cases where lineage remains uncertain. Second, it may assist in lineage negation under limited circumstances, although it does not replace established Islamic legal procedures such as *li'ān*. Third, DNA testing cannot independently establish new *nasab shar'ī* between children born out of wedlock and their biological fathers, as such recognition would conflict with the normative principles governing lineage in Islamic family law.

From the perspective of *maqāṣid al-sharī'ah*, the use of DNA testing generally supports the realization of *ḥifẓ al-nasl*, *ḥifẓ al-nafs*, and *ḥifẓ al-'ird*. DNA testing contributes

to the protection of lineage by ensuring biological certainty, supports human welfare by reducing legal uncertainty, and helps protect dignity by reducing stigma and strengthening children's rights. Nevertheless, its implementation also presents potential risks, including misuse of genetic data, privacy violations, and family conflict.

This study finds that the benefits of DNA testing outweigh its potential harms, provided that its implementation remains legally regulated, procedurally limited, and ethically safeguarded. Therefore, DNA testing should be positioned as a modern evidentiary instrument that supports the realization of *maqāṣid al-sharī'ah* while preserving the foundational principles of Islamic family law.

This study recommends the development of more specific legal regulations governing the use of DNA testing in lineage-related disputes, particularly within Indonesian religious courts. Further empirical studies are also needed to examine how DNA evidence is applied in judicial practice and how it influences legal outcomes in contemporary Islamic family law.

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