

Regaining agency and autonomy: a grounded typology of concealed pregnancy

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Aim. To explore and understand the experience of concealed pregnancy and develop a framework for practitioners.

Background. Numerous cases of concealed pregnancy resulting in serious outcomes including maternal and perinatal death, newborn abandonment and neonaticide are reported internationally. Historically concealed pregnancy is associated with oppressive religious cultures where premarital pregnancy was shunned. Concealed pregnancy has traditionally been viewed through a biomedical lens and associated with mental illness but this assertion remains unsubstantiated by robust evidence.

Design. A Glaserian grounded theory study was undertaken.

Data Sources. Thirty women were interviewed, between 2014-2016, on up to three occasions (46 interviews) and 22 cases of public interest were included as data.

Methods. The constant comparative method and theoretical sampling which are the analytical strategies of grounded theory were used to analyse the data and generate the typology.

Results. Concealed pregnancy is a fearful, life-altering and traumatic experience. Women with a history of controlling and oppressive relationships characterised by fear respond to a crisis pregnancy by keeping it secret. Many women's relationships were characterised by emotional, mental, sexual or physical violence. Fear for one's survival is common, may render women unable to access care or support and can be so extreme that a woman may end her own life or give birth alone.

Conclusions. This typology of concealed pregnancy is intended to aid understanding the fear, trauma and complexities associated with concealed pregnancy which is vital if practitioners are to provide sensitive, responsive and non-judgemental care.

Impact Statement:

Why is this research needed?

- Concealed pregnancy is a contemporary public health issue and can lead to maternal and/or perinatal morbidity and mortality.
- Practitioners require a framework to assist understanding concealed pregnancy in order to prevent catastrophic outcomes.
- Women who conceal a pregnancy experience varying levels of fear impacting their ability to seek assistance, support and antenatal care.

What are the key findings?

- The typology generated identified key factors that influence the duration of concealment which may be internally or externally mediated.
- Women who conceal a pregnancy close to or up to birth may have experienced adverse traumatic life events eg., child sexual abuse, sexual assault or domestic violence.

How should these findings be used to influence policy, practice, research and education?

 A typology of concealed pregnancy may assist practitioners in responding to women sensitively, understand the association with trauma and assist policy makers in developing crisis pregnancy and trauma sensitive services and integrated carepathways.

Keywords: Concealed pregnancy, typology, denied pregnancy, neonaticide, abandonment, grounded theory, midwives/nurses.

Summary

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- Concealed pregnancy is a contemporary public health issue and can lead to maternal and/or perinatal morbidity and mortality.
- Practitioners require a framework to assist understanding concealed pregnancy to prevent catastrophic outcomes.
- Women who conceal a pregnancy experience varying levels of fear, having an impact on their ability to seek assistance, support and antenatal care.

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How should these findings be used to influence policy, practice, research and education?

 A typology of concealed pregnancy may assist practitioners in responding to women sensitively, understand the association with trauma and assist policy makers in developing crisis pregnancy and trauma sensitive services and integrated carepathways. Concealed pregnancy is a contemporary and global phenomenon. Recent international high profile cases with tragic outcomes preceded by concealed pregnancy include maternal and perinatal deaths, newborn abandonment and neonaticide (CNN 2013; BBC, 2014a, Murphy Tighe and Lalor 2016, Reigel 2014, Austrian Times 2014, Jaffer 2014, Brait 2015, Irish Times 2015, Vines 2015).

Historically concealed pregnancy has been associated with negative societal and cultural responses and women feared being ostracised from families and communities (Mahon et al 1998, O'Reilly 2003, McCafferty 2010) as premarital pregnancy was stigmatised (Smith 2007). Societal opprobrium meant many pregnant single women were sent away by families (Logan 1996, Wilson-Buterbaugh 2007) to Magdalen Laundries, Mother and Baby Homes and County Homes in Ireland (Ferriter, 2009) or were sometimes incarcerated in mental institutions (Kelly 2007) compounding the association with concealment and mental illness. Concealed pregnancy is sometimes perceived negatively as an abnormal response to a crisis pregnancy. Literature on concealed pregnancy has a distinct biomedical focus (Jenkins et al 2011, Kenner et al 2015, Sandoz 2011) and links with mental illness made (Spinelli 2004; Spinelli 2014) which remains unsubstantiated (Brockington, 1996, Resnick 1970, Navarro *et al.* 2011, Vellut *et al.* 2012, Hatters-Friedman *et al.* 2009, Porter and Gavin 2010). Jenkins et al (2011) stated concealed pregnancy is a "red flag" and should trigger psychiatric assessment including assessment of maternal capacity.

Current classifications and definitions of concealed pregnancy (Conlon 2006, Spinelli 2004, Maldonado-Duran et al 2000) and denied pregnancy (Vellut et al 2012; Beier et al 2008; Miller 2003; Maldonado-Duran 2000; Neifert & Grotowski 1996; Milstein & Milstein 1983; Werner et al 1980) are inadequate for practitioners dealing with complex cases.

Women conceal a pregnancy due to a paralysing fear of the pregnancy being revealed (Murphy Tighe and Lalor 2016). Literature and media reports focus primarily on outcomes of adoption or infanticide and adaptive aspects of concealed pregnancy are rarely acknowledged (Conlon 2006). Concealed pregnancy has serious implications for mothers and infants and may lead to maternal and neonatal morbidity/mortality (Zaldivar-Jolissaint *et al* 2015, Ali *et al* 2009, Wessel *et al* 2007, Chen *et al* 2007, Lewis 2007, Wessel et al 2003, Sadler 2002, Brezinka 1994). As a hidden phenomenon estimating incidence rates is challenging. Prevalence rates of concealed pregnancy in Ireland (Conlon 2006, Thynne *et al* 2012), Wales (Nirmal *et al* 2006), Berlin (Wessel *et al* 2007) and USA (Hatters Friedman et 2009) are reported. Similar rates of 1:2,500 cases until birth and higher rates where women conceal up to 20 weeks gestation (Conlon 2006; Thynne, 2012) were found with women coming from all socio-economic backgrounds, varying in age, occupation and marital status (Murphy Tighe and Lalor 2016, Wessel *et al*. 2007, Hatters Friedman *et al*. 2007).

Concealed pregnancy is a contemporary phenomenon warranting support rather than intensifying surveillance of women (Murphy Tighe and Lalor 2016a). The literature addresses the association between concealed pregnancy and adoption (Villeneuve-Gokalp *et al.* 2011,Howe et al, 1992, Aloi 2009, Bos, 2007), neonaticide (De Bortoli et al. 2013, Amon *et al.* 2012, Vellut *et al.* 2012, Porter *et al.* 2010, Tursz and Cook 2010, Habek 2010, Beyer *et al.* 2008, Putkonen *et al.* 2007, Riley 2005, Vallone *et al.* 2003, Saunders 1989, D'Orban 1979) with lesser attention on abandonment (Mueller and Sherr 2009). Concealed pregnancy is a precursor to potentially tragic outcomes which must be understood if robust responses are to be developed.

Numerous international cases of newborn abandonment are reported (CNN, 2013, Reigel 2014, Austrian Times 2014, Sydney Morning Herald 2014, Jaffer 2014, Irish Times 2015).

Concerns about concealed pregnancy and child protection exist (Reder et al 1999, Earl et al 2000, Ward 2005, Department of Health 2002) and Serious Case Review's into infant deaths raise questions about the significance of concealed pregnancy (BBC 2014b, Ibbeteson 2014) and maternal –infant attachment (Murphy Tighe and Lalor 2016). Neonaticide cases in Europe, USA and Australia have raised concerns about concealed pregnancy and safeguarding children (Porter *et al* 2010, De Bartoli *et al*, 2013). Reports of trauma amongst women where neonaticide resulted exist (Bonnet 1993; Spinelli 2004, Riley 2005). The typology generated is presented to assist understanding concealed pregnancy.

Aim

The aim of this study was to explore and understand concealed pregnancy to develop a framework for practitioners.

Design

A Glaserian grounded theory study was undertaken to explore and understand the experience of concealed pregnancy. Grounded theory is an inductive method used to explain latent patterns of behaviour (Glaser 2001) and was used to generate a conceptual rendering of the process relevant for practitioners.

Participants

Initially we planned to recruit women through crisis pregnancy counsellors and social workers. Practitioners felt uncomfortable inviting women to the study due to the sensitivities involved. A press release was issued through the University's Communications Office informing the public about the study and 60 women came forward. Women were sent a pack about the study and a cooling off period enabled women to consider participation. Women

who concealed a pregnancy from others resulting in a delay (after twenty weeks gestation) or failure to access maternity care were eligible to participate in the study. Participants in the study were Irish (N=26) and European (Polish (N=1), British (N=2), Austrian (N=1) and were 15-35 years old when the concealed pregnancy occurred.

Data Collection

Thirty women were interviewed about current or previous experience of concealing a pregnancy. Two women were concealing their pregnancies and twenty eight women had concealed a pregnancy from 4-48 years previously, ranging in age from 23-68 years when interviewed. Women living in Ireland and abroad were interviewed face to face (N=37); via SKYPE (N=6) and via telephone (N=3). Interviews were mainly conducted in hotels to ensure privacy and confidentiality and took between one to three hours to conduct. To ease women into the interview process they were asked a little about the family they grew up in. Further questions included can you tell me about your experience of concealing the pregnancy and can you tell me more about what happened after your baby was born. Data collection and data analysis took place simultaneously during the study. Women who had experienced significant outcomes or traumatic experiences were theoretical sampled and invited to participate in another interview, while some women requested to participate in further interviews. Many women reported engaging in the study as being helpful as it enabled disclosure and many wished to help other women in such situations. Twenty two cases of public interest involving concealed pregnancy with tragic outcomes were also included as data. This data included media reports, coroners' reports and Serious Case Reviews and provided information relating to rare cases of abandonment or neonaticide.

Ethical considerations

Ethical approval for the study was granted by the University. Women were reassured of confidentiality when participating in the study and were informed in advance that it would be broken if the interviewer as a registered midwife became concerned for her safety. Written informed consent was obtained prior to interview. Women were given the choice as to their preferred location for interviewing. Thirty women were interviewed and 46 interviews were undertaken in total. Most women opted to meet in a hotel, one woman was interviewed at home, one woman was interviewed at her workplace and lone researcher guidelines were followed. Lone researcher guidelines are important to protect the participant and researcher by providing access to ongoing support and safety mechanisms for example, one participant disclosed suicidal ideation and another revealed an infanticide. Women were offered a counselling session after participating in the study and thirteen women availed of this offer whilst four women never had counselling previously. Following interviews a phone call or email was made to enquire about the woman's wellbeing and offer support.

Data Analysis

All interviews were transcribed and women's stories were compared and grouped into similar categories initially focussing on outcomes. The constant comparative method was employed to look for patterns in the data and transcripts were coded and compared for similarities and differences (Glaser 2001). Codes that frequently appeared during the open coding phase of preliminary interviews were related to secrecy. Initial codes were a start from which the analysis was built and these formed the basis for the development of selective codes. Examining the data for interchangeablity of indices and the frequency with which the indicators occurred enabled assumptions to be challenged and connections to be made.

Constant comparison of categories featuring outcomes and key life experiences enabled identification of women for invitation to provide additional interviews. Theoretical sampling of such cases enabled the collection of rich data and further exploration of connections in the data. Theoretical sampling was undertaken between and within participants sampling for age, varying outcomes including adoption, fostering, mothering, recurrence, pre-pregnancy trauma, domestic violence and complicated attachment. Follow up interviews enabled clarification of issues previously raised and concepts raised by other women were also explored as women's main concern was identified. I sought information from women in relation to early life experiences and experiences with caregivers. Field notes and memos were written throughout the study. Memos were written to record analytic and reflexive insights and process decisions and outcomes. As substantive codes emerged hypothesis testing was interwoven into the interview process. This involved seeking clarification from participants about specific emerging hypothesis for example, in relation to specific outcomes such as mothering or adoption the interviewer asked subsequent participants if decisions re: guardianship were voluntary or enforced. Substantive categories then subsumed some open codes. Analysis then moved onto pre-pregnancy trauma as a possible predictor of the degree of concealment. Focusing on working back from the outcomes to identify if the factors which prolong concealment are internally or externally mediated and if there were indications that pre-pregnancy experiences related to early life or traumatic events had an impact on the process. The researcher recorded key incidents and significant statements that related to emergent categories. As conceptualisation evolved the data were interrogated for links between women who concealed the pregnancy themselves and others who reported being forced to conceal the pregnancy due to external factors. Once theoretical saturation of the core concept was achieved the researcher proceeded to review all data, field notes, memos and then sorted by category. Data saturation occurred when 46 interviews were conducted

and no new themes emerged. When looking for latent patterns the typology emerged. The first author undertook all the interviews with supervisory support and debriefing from the second author and a counsellor in view of the sensitive nature of the research.

Findings

The typology of concealed pregnancy recognises fear as central to the process as seen in the vertical axis (Figure 1). In the horizontal axis agency and autonomy are seen as critical factors as women's main concern was: "regaining agency and autonomy" and being in charge of their own destiny. In this study agency refers to ones' capacity to act while autonomy refers to ones' freedom to act. Two approaches to concealing a pregnancy were identified: "making myself invisible" (Quadrant 1) and "being made invisible" (Quadrant 4). Nine key factors (internal and external mediating factors) were identified as contributing to the process of concealed pregnancy. Characteristics of the participants are outlined in Table 1.

The typology is intended as a framework for practitioners to understand the process of concealed pregnancy. Concealed pregnancy is a life-defining and traumatic experience which does not end with the birth of the baby. The typology (Figure 1) identifies that concealed pregnancy may be internally or externally mediated with a trajectory of concealing and revealing over time. Women described fear as disabling, rendering them unable to seek support. For some fear related to a violent partner, parent or fear of a social reprisal and have an impact on coping responses of secrecy, silence and avoidance. For the purpose of clarity let's consider the typology in two halves. The left hand side considers women for whom concealed pregnancy is externally mediated. The right hand side highlights internal mediating factors which lead to concealed pregnancy.

The data suggests that women who conceal a pregnancy (internally mediated) up to or close to childbirth have a history of pre-pregnancy trauma or complicated attachment (Quadrant 1) e.g., child sexual abuse, sexual assault or controlling relationships. If women conceal close to or up to birth they may not mother their infants and abandonment or neonaticide may feature (Quadrant 1). Women who concealed the pregnancy themselves (Quadrant 1) described self-isolation which was conceptualised as "making myself invisible". The greater the fear the more likely the woman is to stay away, hide and risk birthing alone. Amongst individuals who have experienced trauma, hiding may be a way of surviving (Browne 2013, Courtois and Riley 1999). Model, borderline and related cases and a new definition of concealed pregnancy are described in a concept analysis (Murphy Tighe and Lalor 2016). A model case is a classic case and demonstrates all the defining attributes of the case. A borderline case has some attributes of the case while a related case does not contain the critical attributes of the case (Walker and Avant 2011).

An example of a model case (Quadrant 1) is Maeve who became pregnant at 15 years old following a sexual assault and previously was abused by a family friend. Maeve's fear increased in intensity and the outcome remained secret for years. She had an unassisted birth resulting in neonaticide:

"I have no memory of movement. I have no memory because I probably didn't touch myself because I was being abused."

Maeve described her relationship with her mother (complicated attachment):

"like I had no experience of maternal....my mother didn't do children, she didn't like children."

Maeve spoke about her baby:

"I have no memory of any connection....I was lost, lost inside of myself, but putting on a mask of coping because that's what we do.....a lot of disconnection to just help me survive."

Speaking about the birth, Maeve explained:

"I did it all myself.....still not telling....I knew what was going on but I could never put words on it,...it was too horrific to go near....I have no memory of it (birth)...I didn't look, I couldn't, it was too painful."

Maeve remembers little from this time saying:

"in my memory of remembering it was like I was watching it.....I count myself as a mother," and thought

"that I'd end up in jail, which is why I never went forward for any help."

In terms of moving on the trajectory of concealing and revealing, the fear only diminished over time and through independence from her family.

Maeve described "the lying meant I had to avoid things", "I lived in fear of being found out," "but instinctively I took charge." Speaking about the consequences Maeve shared "I have unresolved post-traumatic stress that I manage very well," but:

"running that came from this, definitely from the baby, from the concealed pregnancy, from the abuse."

Maeve resisted "being pathologised" and said "to do what we've done there must be something wrong with us...I must be sick and that's what makes us patients or victims." Speaking about healing she said:

"nurturing to soothe the fear, nurturing is what makes us better. I think the whole idea of trauma and treatment is that you use the trauma which is the crisis as an opportunity."

When concealed pregnancy is internally mediated a woman may be found out close to or during the birth and others may keep the secret (Murphy Tighe and Lalor 2016). Rachel whose infant was adopted due to social conformity had accessed antenatal care (borderline case) (Quadrant 2) said: "I was dismantled as a mother" and lives with anguish and loss today.

Elaine concealed her second pregnancy from her family with her partners' knowledge is an example of a borderline case (Quadrant 2). She concealed her first pregnancy for six months but was found out and recurrence of concealment features. Elaine felt pressure to mother her child, was unable to voice her wish for an adoption and reported significant difficulties postnatally:

"looking back it was postpartum depression, I mean a lot of it was triggered by the fact that I was sort of forced into having a child...by having no choice but to keep a child."

Elaine had experienced a gang-rape during her adolescence:

"it's all buried inside me, I don't tell anyone, I don't talk about anything. I just bury it. Everything, secrets, feelings, just bury it because that's the way I've always been...it's not forgetting it's just putting it to the back of my mind and focus on more pressing issues basically."

Margaret was sexually abused as an adolescent, became pregnant at eighteen and her infant was stillborn (Quadrant 2). She presented to hospital when fetal movements stopped:

"I often wonder how things might have turned out if I'd never panicked the day I realised she hadn't been moving and gone to the hospital. Would I have had to silently bear the pain of birthing her alone in my bedroom with the door locked? What decisions would I have made about what to do with her tiny body?"

She said:

"I've done years of therapy and have put a lot of stuff behind me, forgiven either myself or the person who has hurt me very badly or simply let things go that were causing me pain, but this? My child who I hid like a dirty little secret and then abandoned, to be buried nameless by a stranger, it's the single biggest regret of my life. I don't think I'll ever make peace with it."

Margaret spoke about counselling:

"Therapy brought me to a place where the only hope I see of a happy future is to carry it, neatly wrapped in its' little box and hope the ribbon stays tied. Because if that ribbon unravels, so does my entire life. And I don't think I can survive that."

The duration of concealment in borderline cases in Quadrant 2 is usually not as long as model cases (*Quadrant 1*). It involves the woman revealing the pregnancy or being found out (*regaining agency and autonomy*), while the fear is great it is not so intense that the woman will risk birthing alone and the outcome is determined by the woman.

Carrie's story illustrates movement in the typology from "regaining agency and autonomy" by concealing the pregnancy and choosing adoption (Quadrant 2) to "being made invisible" (Quadrant 4) by her abusive husband and finally being enabled to *"regain agency and autonomy"* (Quadrant 3) after accessing therapy. Carrie presented to hospital at eight months when she recognised:

"I would need help, I mean I couldn't do it on my own."

Carrie concealed her pregnancy and placed her baby for adoption (Quadrant 2):

"I was very aware that I was pregnant... There was no denial, I was pregnant and no one was going to know about this but me, I proactively concealed my pregnancy."

Recalling the birth:

"it was horrible, shocking.....I was aware of the birds and then I was aware of my baby being born, but I can't actually remember anything from it and I know it's my head trying to block it out."

Carrie who had a history of *child sexual abuse* reflected:

"No one ever asked me why I wanted an adoption. But at the time adoption was the right option for me."

Carrie concealed her pregnancy but found out years later her mother knew of her pregnancy and never offered support:

"I actually tried to broach it with my mother but she was in denial but she had applied for the birth certificate a week after the delivery."

Carrie married a man she met shortly after she conceived. He found a letter she wrote to her adopted child:

"I married him under the understanding that if I got married I wouldn't ever have to tell my parents that I had conceivedeverything changed after that."

Carrie concealed her pregnancy and choose adoption to: "to regain agency and autonomy" (Quadrant 2) as it was her choice not to mother. After marrying she was living in a controlling relationship and movement in the typology is seen where she was "being made invisible" (Quadrant 4). Her husband threatened:

> "you behave or I'll tell your children what type of a woman you are. What kind of a woman gives up her child?"

Her husband said before his death:

"do not sell this house and do not tell my children about your bastard son." Carrie kept the adoption secret for years (*remains a secret*). After her husband's death she experienced psychological distress and she cut herself to release the pain:

> "because you do shelve a great aspect of your life and that's self-preservation, it's not, it's not denial, it is so you can keep moving....I developed a coping strategy that I've kept since...I began to isolate myself from people and I began to believe I couldn't trust anyone. I was able to distance myself further from people....I suppose it's a learned behaviour, it allowed me to cope."

Carrie shared details of traumatic experiences:

"I had been initiated into sex so early in my life, it didn't seem wrong to be having sex from an early age as my brother abused me for years. When I started having sex with my boyfriend I was about twelve or thirteen, at the same time as being abused at home. I didn't know any different, I thought that's how you sustained and maintained a relationship with someone." The events in Carries' life seemed to explain why at one point she self-harmed, used alcohol to numb the pain and after child protection services were notified she became suicidal. Carrie felt many practitioners had little insight into abuse and its' role in concealed pregnancy. Carrie remarried and her spouse has no issue with her previous adoption which is now "*part of her lifestory*." She attended counselling and emphasised the importance of quality therapeutic services which has enabled her cope (*regaining agency and autonomy*) (Quadrant 3) with abuse in her earlier life and hopes her adopted child will make contact in the future:

"There was a lot of healing on the back of that to be able to go on. But that could only have happened after the death of my husband. I don't know if I could have been so proactive in how I felt had he still been alive.....it was a very traumatic few years trying to heal myself."

Quadrant 4 refers to externally mediated cases where the woman conceals the pregnancy close to or up to birth due to oppressive factors which was conceptualised as *"being made invisible."* The fear experienced can be as intense as internally mediated cases in Quadrant 1. Instigators of fear include: violent intimate partners, child protection services, poverty and employers. Domestic violence in pregnancy is recognised yet the relationship with concealed pregnancy is rarely referenced in the literature. Access to services, family and friends may be controlled or monitored by another and women are more likely to mother their infants than cases which are internally mediated (Quadrant 1). Sarah concealed her second pregnancy nearly until birth due to domestic violence reported being:

"disconnected, shut down, numb and depressed really.... fear motivated every decision I made."

She explained "then I felt the child kicking and I was happy with that" yet felt "very lonely indeed and it's also the joy of the pregnancy that's missed...you are missing this memory of memories." Sarah outlined:

"I am a bit of a closed book or I used to be, when you're in a violent relationship you're caught up in it for such a long time. You don't talk about it because nobody wants to know, do you really want to frighten away the few people who you actually can talk to."

Women living with domestic violence described having no support and some could not access healthcare.

Sarah recollected:

"Looking back I remember my doctor giving me information on clinics (abortion) in the UK but I wasn't asked or given any information on domestic violence services."

Women experiencing domestic violence reported beatings, psychological abuse with miscarriages, stillbirths and mothering featuring as outcomes in Quadrant 4. Women described the emotional have an impact on of violence where they were in grave danger and a bleak sense of hopelessness pervaded their lives. In externally mediated cases the woman may be enabled to "*regain agency and autonomy*" if she is enabled to leave the oppressor. These women generally conceal for a shorter time than those in quadrant 1 and usually mother their infants. Poverty and employers are critical factors in externally mediated cases and relate to low income, poor housing, dependency and social exclusion. Such resources were identified by women as critical to mother their infants.

Women experiencing intense fear reported a diminished sense of autonomy and control. If a woman is enabled to obtain support, reveals the pregnancy or is found out she may be empowered to "*regain agency and autonomy*" or she may be disempowered if others dictate the outcome.

Concealed pregnancy does not end with the birth of the baby as women negotiate their situation in the context of relationships and life events as the first circle indicates (Figure 1) which may become "part of her lifestory." Women with a history of abuse or complicated attachment may conceal the pregnancy and outcome for years "remains a secret." Women with supportive relationships may be enabled to reveal earlier "regain agency and autonomy" by choosing if they wish to mother their infant or not. Women experienced varying degrees of secrecy including hidden adoptions, unassisted births, neonaticide and perinatal deaths. One participant has told everyone that her child is adopted but she is her biological child. The degree of secrecy that persists means that concealment is unresolved compunding the psychological burden.

The outer circle relates to "social structures" and "patterns of expectation" which includes age, career/educational expectations, marital status, familial, community and cultural factors that have an impact on concealed pregnancy. This research has identified for the first time that some women felt coerced into mothering with consequences for maternal-infant attachment. The outer circle illustrates the typology is a dynamic process evolving over time and captures all the presentations of concealed pregnancy reported.

We propose concealed and denied pregnancy are the same process. Levels of fear exist, which have an impact on coping responses and the degree of avoidance observed. Denial has been used a legal defence in tragic cases. The discourse of psychopathology is prevalent in media and court reports as legal teams appeal for leniency. Shauna stated:

"it made it real because you can deny it in your head when you can't see it but once the movement starts it's like oh god this is actually happening...I just thought I'd turn up at the hospital and go right give her to them people"

Aileen cried recalling:

"It's still the story I tell today that I did not know I was pregnant. But I did know. How can I tell anyone my child was very nearly adopted."

Eileen who sought antenatal care just before the birth of her baby said:

"I told myself I had a cyst or even a tumour. I never took a bath, only a shower I couldn't look down or I would have had to acknowledge I was pregnant."

We contend that denial is actually avoidance (*emotional focussed coping strategy*). Denial and avoidance are seen in other healthcare cases e.g., denial following a diagnosis of terminal illness despite being informed or avoiding/ignoring serious symptoms. To substantiate this point we draw on a case of public interest (UK) which involved a young woman who arrived to hospital with her dead newborn after an unassisted birth denying knowledge of pregnancy. Diary extracts read in Court:

"Please, please help me. I'm scared but trying to block it out...why can't it go away? Why can't it just go to sleep and leave me alone?"

The psychiatrists' report found the woman had no mental illness. This woman had presented late at 26 weeks for an abortion (Brooke 2007) which was a missed opportunity to assist and support her.

Measures to Ensure Quality

This study involved the collection of rich, in-depth and sensitive data from thirty women who were concealing or had concealed a pregnancy in the past and data from twenty two cases of public interest was also analysed. Interactions with professionals was also used to test the hypothesis about the emerging typology. While testing the emerging typology with women and stakeholders the core category was further refined. As data collection was almost complete and the abstract model was being saturated, seven women selected randomly were invited to test the typology for "fit." Each woman confirmed they could recognise their own experience in the framework presented. All women were keen that professionals "understand" what is going on for women and reject pathologisation and victimhood. The credibility of the findings will be appraised by readers and the utility of the framework for practitioners is there to assist understanding concealed pregnancy.

Discussion

Different types of concealed pregnancy (*internally Vs externally mediated*) exist. This study found an association between concealed pregnancy and trauma especially where concealment occurs close to, up to or after childbirth. Kenner and Nicolson (2015) contend that pregnancy denial's association with neonaticide has led to misleading forensic data, which obscures the central role of trauma. Women may experience subsequent unresolved trauma following a concealed pregnancy especially during subsequent pregnancies eg., psychological ill-health, self-harm and suicidal ideation and intent.

Concealed pregnancy must be urgently re-appraised from a traumatology perspective rather than through a biomedical lens which locates the pathology in the woman. Psychopathology rarely causes concealed pregnancy however the literature usually refers to mental illness (Jenkins et al 2011, Spinelli 2014) and references to denial dominate the literature (Kenner and Nicolson 2015, Murphy Tighe and Lalor 2016). The paralysing fear, complex emotions and thought processes explain coping mechanisms of avoidance rather than psychopathology. Avoidance is defined as a mechanism or way of coping with stressors that cannot be controlled (Miller 2016). Coping refers to cognitive and/or behavioural attempts to manage stressors, which can be partially temperament dependent but is also dynamic and influenced by context and experience (Miller 2016). Avoidance is also observed as a feature of PTSD (Ayers and Ford 2016) and is found amongst women who have a history of child sexual abuse or previous reproductive trauma.

This typology suggests that a focus on pre-pregnancy trauma, complicated attachment and domestic violence warrants attention. Professionals need to understand the extent to which fear can result in women concealing a pregnancy to the point of having an unassisted birth and the association with trauma. Developing supportive information and services where women can reveal is critical rather than intensifying surveillance. By understanding concealed pregnancy practitioners may enable women to regain control and assist in a successful adaptation following the birth. Increasing child protection and surveillance measures may increase the fear experienced by women and decrease opportunities for engagement. Developing care pathways and trauma sensitive therapeutic interventions to support women experiencing a concealed pregnancy is vital.

Limitations: A limitation of this typology is that only one participant's outcome included neonaticide. Data relating to neonaticide and abandonment cases are drawn from cases of public interest. Another limitation is that the data does not include the views of partners, children or family members. A paucity of literature exists in relation to concealed pregnancy as the majority of papers reviewed related to denied pregnancy.

Conclusions

The reasons for concealed pregnancy may have changed but the fear women experience has not. Concealed pregnancy still occurs in liberal societies espousing reproductive autonomy for women. Concealed pregnancy must be appraised urgently from a traumatology perspective rather than through a biomedical lens. Practitioners must be educated in the delivery of trauma informed care while access to non-directive counselling and therapeutic services is vital. Participants have called for a contemporary discussion on concealed pregnancy as many reported being silenced by societal, professional and media portrayals. Women reject being vilified, especially those who have had adverse traumatic, abusive or coercive experiences. Portraying women as victims does little to assist them to come to terms with the experience of concealed pregnancy. Concealed pregnancy remains sensitive and taboo for many with insights from women themselves rarely heard. We hope this paper redresses this imbalance and that the typology aids understanding the complex process of concealed pregnancy.

Author Contributions:

All authors have agreed on the final version and meet at least one of the following criteria (recommended by the ICMJE*):

1) substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data;

2) drafting the article or revising it critically for important intellectual content.

* http://www.icmje.org/recommendations/

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Table One: Characteristics of Participants and Cases of Public Interest

0	N 0.	Name	Marital Status	Nationa lity	Age when concea led	Duration of Conceal ment	Anteced ent	Outcome - woman	Outcom e - Infant	Rec ur	Case
\mathbf{C}	1	Maeve	Single	British	15	15 yrs	CSA & SA	Unassisted birth/PTSD	Neonati cide	No	Mod el
	2	France s	Single	Irish	18	to birth	Control Relation ship	Unassisted birth	Mothere d	No	Mod el
	3	Monic a	Single	Polish	35	to birth	Control Relation ship	Mothered	Mothere d	No	Mod el
	4a	Elaine	Single	Irish	19	6 months	SA	Attachment issues	Mothere d	Yes	B/L
	4b	Elaine	Single	Irish	23	5 months	SA	Suicidal Ideation/ MHS	Adoptio n	No	B/L
	5	Carrie	Single	Irish	19	8 months	CSA	Suicidal Ideation/M HS	Adoptio n	No	B/L
	6	Marga ret	Single	Irish	18	16 yrs	CSA	Suicidal Ideation/M HS	NND	No	B/L
+	7	Shaun a	Single	Irish	19	8 months	SA	Suicidal Ideation, PND, PTSD	Mothere d	No	B/L
	8	Anne	Single	British	19	to birth	Control Relation ship		Stillbor n	No	B/L
	9	Nicola	Single	Irish	19	to birth	Control Relation ship		Stillbor n	No	B/L
U	10	Karen	Single	Irish	19	6 months	Control Relation ship		Mothere d	No	B/L
U	11 a	Sheen a	Single	Irish	17	7 months	Control Relation ship	Mother & Baby Home	Adoptio n	Yes	Mod el
	11 b	Sheen a	Single	Irish	19	to birth	Control Relation ship	Depression/ MHS	Adoptio n	No	Mod el
	12	Rachel	Single	Irish	30	to birth	Conform	Supported Accommod	Adoptio	No	B/L

							ity	ation	n		T1
	13	Eileen	Single	Irish	21	8 months	Conform ity	Mental illness	Adoptio n	No	B/L T1
	14	Joan	Single	Irish	16		Conform ity		Adoptio n	No	B/L T1
	15 a	Aine	Single	Irish	18	8 months	Conform ity		Mothere d	Yes	B/L T1
	15 b	Aine	Single	Irish	21	25 yrs	Conform ity		Adoptio n	No	B/L T1
	16	Paulin e	Single	Irish	18	8 months	Control Relation ship		Mothere d	No	B/L T1
	17	Avril	Single	Irish	19	6 months	Conform ity		Mothere d	No	B/L T2
	18	Cora	Single	Irish	18	5 months	Conform ity		Mothere d	No	B/L T2
	19	Jennif er	Single	Irish	19	5 months	Conform ity		Mothere d	No	B/L T2
	20	Aileen	Single	Irish	21	7 months	Complic ated attachme nt		Mothere d	No	B/L T2
	21	Leonie	Single	Irish	25	to labour	Control Relation ship		Mothere d	No	B/L T2
+	22 a	Penny	Single	Irish	24	to labour	Control Relation ship		Mothere d	Yes	B/L T2
	22 b	Penny	Single	Irish	26	7 months	Control Relation ship	Pregnancy discovered	Mothere d	Yes	Mod el T3
	22 c	Penny	Single	Irish	29	to labour	Control Relation ship		Mothere d	No	B/L T1
	23	Orla	Single	Irish	19	8 months	Complic ated attachme nt	Adopted herself	Mothere d	No	B/L T1
							Complic ated				
	24	Marie	Singe	Irish	24	5 months	attachme nt	Adopted herself	Mothere d	No	B/L T1
	25	Laura	Single	Irish	30	7 months	Conform		Mothere	No	B/L

							ity		d		T1
	26	Helen	Single	Irish	20	to labour	Conform ity		Mothere d	No	B/L T2
	26	Sarah	Single	Austrian	34	8 months	D violence	Depression	Mothere d	No	B/L T2
	27	Eva	Single	Irish	17	7 months	D violence	Stillbirth/ MHS	Mothere d	Yes	B/L T2
	28	Roisin	Married	Irish	33	post birth	D violence	Suicidal Ideation	Mothere d	Yes	B/L T2
	29	Irene	Single	Irish	24	6 months	D violence		Mothere d	No	B/L T3
	30	Siobha n	Married	Irish	34	5 months	Career		Mothere d	No	B/L T3
	1	Mary Duffy	Cohabiti ng	Irish	42	to birth	5 children	Tried to access abortion	Infant found dead in hotpress	No	Mod el
	2	Lynse y Lowe	Cohabiti ng	America n	24	to birth	SA	Jailed 51 yrs infanticide	Twins Smother ed	No	Mod el
	3	J Hayes	Cohabiti ng	Irish	24	to birth	Control Reln	Criminalise d (1984)	Stillbor n	Yes	Mod el
	4	A Lovett	Cohabiti ng	Irish	15	to birth	Unknow n	Maternal Death	NND	No	Mod el
	5	Molly	Cohabiti ng	America n	18	to birth	Comp attach	Maternal Death	Twin NND	No	Mod el
	6	Unkno wn	Cohabiti ng	British		post birth	Fear CPS		8 children in care		Mod el
	7	Unkno wn	Cohabiti ng	Irish	25	post birth	Unknow n	Charged COB	Stillbor n	No	Mod el
	8	Identif ied	Cohabiti ng	British	26	to birth	Unknow n	Missed opportunitie s	Dead Newbor n	No	Mod el
U	9	Unkno wn	Cohabiti ng	Scotish		Unknown	Unknow n	Unknown	Dead Newbor n		Mod el
	10	Unkno wn	Cohabiti ng	Samoan	30	To term	Unknow n	Had 5 yr old child	Abando ned baby	No	Mod el
	11	Unkno wn	Cohabiti ng	British		Not Recorded	Unknow n	Mother found 4 days	Body Found Bin		Mod el

									Daha	
	12	Unkno wn	Cohabiti ng	Europea n	28	To term	Unknow n	Mother located	Baby Found Alive	Mod el
0	13	Baby April Case	Cohabiti ng	British	30	To term	Kids in care	Mother found	Found in Toilet	Mod el
	14	Baby Allana h	Cohabiti ng	Ireland				Mother not located	Infant Remain s Found	Mod el
-	15	May- 15	Cohabiti ng	British	36	to term	2 children	Extramarital affair	Left on Doorste p	Mod el
	16	Jun-15	Unknow n	Welsh				Mother not located	Infant found in river	Mod el
	17	Andre a G	Separate d	German	45			14 yr jail sentence	8 infants bodies found	Mod el
	18	Dec- 15	Single	Mexica n	18	to term		Mother not charged	Infant found NY church	Mod el
	19	Nov- 15	Unkno wn	America n				Gave birth hosp	Newbor n hidden road	Mod el
Ð	20	Mar- 16	Unknow n	America n		Unknown	Unknow n	Mother not located	Live newbor n in waste	Mod el
0	21	Jul-16	Unknow n	Romani an	26	to birth	Unknow n	Charged attempted murder	Found Hosp Toilet UK	Mod el
Ð	22	Case Ellie Butler	Relation ship	British			D violence	Mother charged also	Father convicte d murder	

Model case: Case definitions as defined in Murphy Tighe S Lalor JG (2016) Concealed pregnancy: a concept analysis, Journal of Advanced Nursing

B/L: Borderline	B/L 2: Borderline Type 2
B/L 1: Borderline Case Type 1	B/L 3: Borderline Type 3
Blue Shaded Cells= Cases of Public Interest	Unshaded Cells= Participants
Recur=Recurrence	SA=Sexual Abuse
CSA=Child Sexual Abuse	MHS=Mental Health Services



