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ORIGINAL PAPER

Women's experiences of unplanned out of hospital deliveries: a narrative analysis

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Abstract

Aim: The centralization of Finnish maternity services can mean longer journeys when women are in labor. The aim of this study was to describe women's experiences of having an unplanned out-of-hospital delivery (OHD) and to produce a deeper understanding of how to support them when this happens. *Design:* Qualitative descriptive study design with narrative inquiry method. *Methods:* Individual interviews were carried out with 15 women who had an unplanned OHD and the data were analyzed using a narrative method. *Results:* Three narratives described the women's experiences of an unplanned OHD with a common plot being their sense of control. In the first narrative, a sense of control was maintained; in the second, the sense of control fluctuated; and the third narrative centered on a loss of control. All the narratives were related to the women's experiences of what was happening to their body, the people around them during delivery, and the situation after the childbirth. *Conclusion:* Having an unplanned OHD forced women to reconsider their preconceptions and expectations of childbirth and focus on how to handle the situation at hand. A key factor was the sense of control they felt while giving birth, which should be considered a core principle in maternity care practices, from antenatal care to delivery.

Keywords: centralized maternity services, childbirth, narrative research, unplanned out-of-hospital delivery, sense of control.

Introduction

The terms unplanned out-of-hospital delivery (OHD) (Ovaskainen et al., 2020) and born before arrival are used to describe sudden deliveries that happen without a midwife or obstetrician present (Javaudin et al., 2019; McLelland et al., 2014; Vik et al., 2016). Such births may happen at home or on the way to hospital. The first person to assist a woman having an unplanned OHD is often a paramedic, spouse, other family member, or neighbor (Jarneid et al., 2020; Vik et al., 2016). Unplanned OHDs have been associated with a range of factors: a higher number of previous deliveries (Ovaskainen et al., 2020; Renesme et al., 2013; Viisainen et al., 1999), single mothers, fewer prenatal visits (Ovaskainen et al., 2020; Renesme et al., 2013) smoking during pregnancy (Gunnarsson et al., 2014; Ovaskainen et al., 2020; Viisainen et al., 1999), and alcohol or drug abuse (Ovaskainen et al., 2020). Studies have shown that having to travel a long distance to the delivery unit increases the risk of unplanned OHDs (Hemminki et al., 2011; Jarneid et al., 2020; Örtqvist et al., 2021; Renesme et al., 2013; Vik et al., 2016). The risk increases when the distance is more than 35 kilometers (Blondel et al., 2011; Ovaskainen et al., 2020) or the travel time is more than 30-45 minutes (Örtqvist et al., 2021; Renesme et al., 2013).

Unplanned OHDs increase the risk of neonatal mortality and have implications for the mother's health and safe childbirth (Gunnarsson et al., 2014; Gutvirtz et al., 2020; Hemminki et al., 2011; Javaudin et al., 2019; Örtqvist et al., 2021). Women who have unplanned OHDs experience more damage to the birth canal, bleeding after labor (Hadar et al., 2005; McLelland et al., 2014), and manual removal of the placenta (Sheiner et al., 2004). The risks to the infants are perinatal mortality, hypothermia, polycythemia (McLelland et al., 2014; Pasternak et al., 2018), respiratory failure, and infections (Ovaskainen et al., 2020). Unplanned OHDs can also prevent women and families from experiencing high-quality births that meet their needs.

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The incidence of unplanned OHDs has increased in many countries in the past few years (Gunnarsson et al., 2014; Jarneid et al., 2020; Javaudin et al., 2019; Vik et al., 2016), including Finland (Finnish Institute for Health and Welfare, 2019; Ovaskainen et al., 2020). The global prevalence of unplanned OHDs is estimated to be 0.19–0.61% of all deliveries (Javaudin et al., 2019). In Finland, 213 of the 45,613 children born in 2019 were unplanned OHDs, which was 22.4% higher than in 2018 (Finnish Institute for Health and Welfare, 2019).

A woman's birth experience comprises several physical and psychosocial factors. It has an effect on the well-being of the woman and the whole family (Larkin et al., 2017). Women who are in labor have been found to have different levels of fear and anxiety (Demirel Güler et al., 2019). Expectations and hopes about giving birth and safe, high-quality care during childbirth are an important part of a positive birth experience, resulting in a positive effect on the interaction between the mother and her child and the woman's attitude about possible future pregnancies and births (Bossano et al., 2017; Larkin et al., 2017). Conversely, a negative birth experience can lead to traumatic stress syndrome, postpartum depression and fear of childbirth (Garthus-Niegel et al., 2014). It can also have a negative impact on a woman's early interaction with her child and successful breastfeeding (Henriksen et al., 2017).

Women with unplanned OHDs do not feel that they or their baby are safe (Shorey & Ang, 2016; Turkmen et al., 2018). They experience loneliness, heightening their fear of potential complications (Vik et al., 2016). Being in an uncertain birth environment reduces their sense of control during childbirth (Shorey & Ang, 2016; Turkmen et al., 2018) resulting in a negative birth experience (Garthus-Niegel et al., 2014; Henriksen et al., 2017; Shorey & Ang, 2016; Turkmen et al., 2018). Women with unplanned OHDs expect paramedics to communicate respectfully and to seek consent for examinations and procedures. However, problematic encounters with paramedics, such as disrespectful behavior, lack of empathy, and poor interaction negatively influence birth experiences (Flanagan et al., 2019). More knowledge is needed about women's experiences of unplanned OHD deliveries.

Aim

The aim of the study was to describe woman's experiences of unplanned OHDs and to use their narratives to deepen our understanding of how to support women who find themselves in this situation.

Methods

Design

We used a qualitative descriptive study design with a narrative inquiry method (Polkinghorne, 1995) to describe the women's individual and unique perspectives of an unplanned OHD. The narrative research explored how they described the unplanned OHD phenomenon. A narrative approach mediates and builds information and provides knowledge that increases our understanding of how a person structures reality and provides meaning to experiences (Hardy et al., 2009; Polkinghorne, 1995). It was also appropriate for this study since there was limited previous knowledge on the study topic.

Sample

We used a purposive sampling method and the participants were recruited in collaboration with the nationwide Emergency Medical Services, which coordinates and provides paramedic care in Finland. We received research permission from the organization, and they shared the study details on their Facebook page. Women who had experienced unplanned OHDs were invited to contact the researcher to arrange an interview. They had to be at least 18 years old and able to communicate in Finnish.

The study was conducted in Finland, which has a publicly provided healthcare service. Most women (99.4%) give birth in hospital. The proportion of unplanned OHDs in Finland is relatively small (0.1%), but rising. (Finnish Institute for Health and Welfare, 2019; Hemminki et al., 2011; Ovaskainen et al., 2020). Ongoing public health and social service reforms have closed smaller delivery units and deliveries have been centralized in larger units to ensure round-the-clock resources for emergency cesarean sections and newborn resuscitation (Government Decree 771/2022; Ovaskainen et al., 2020). Distances to the nearest delivery units have increased (Finnish Institute for Health and Welfare, 2019; Hemminki et al., 2011) and this may have increased unplanned OHDs (Hemminki et al., 2011; Ovaskainen et al., 2020).

The study comprised 15 women, who had experienced an unplanned OHD in the last five years at 25–35 years of age (Table 1). Fourteen had given birth before and nine lived up to 20 kilometers from the nearest delivery unit. In three cases the journey

was more than 50 kilometers. The women's labor had begun spontaneously at 37–42 weeks of gestation, and none had had pre-identified childbirth risks. Eleven had delivered at home or in an ambulance, three in a car and one at a neighbors' house. No midwives or obstetricians were present. Nine were assisted by a paramedic and the others were delivered by a family member or friend.

Table 1 Background information of the 15 women who participated in this study

Background information	n
Age	
25–30	8
31–35	7
Number of births	
first	1
second	10
third or more	4
Gestational week of birth	
37	1
38	3
39	4
40	4
41	2
42	1
Distance to hospital	
< 10 kilometers	5
10–20	4
21–30	1
> 50	3
Place of birth	
home	6
ambulance	5
car	3
neighbor's home	1
Assistant during birth	
paramedic	9
family member	4
friend	2

Data collection

The data were collected in 2017 during individual interviews and analyzed using Polkinghorne's narrative analysis method (1995) to ensure a confident and open discussion on this private topic. In accordance with this method, we had only one open-ended question: "Tell me about your experience of giving birth". In addition, we used prompts based on participants' descriptions of the birth. The first interview was a pilot test, but was included in the final data, as no changes were required. A researcher (HJ), who had not had any prior contact with the participants, carried out 14 telephone interviews and one face-to-face interview. They lasted a mean of 35 (range 15–59) minutes and resulted in 522 minutes of audio recorded data.

Data analysis

Polkinghorne's narrative analysis method (1995) was used to determine the plot that ran through the women's accounts and united the different characteristics of the narratives. Narrative analysis finds the beginning, middle and end of narratives in research material to create a common plot that moves the narrative forward (Polkinghorne, 1995). This creates a narrative structure that enables people to understand and describe relationships between events and choices at certain times and in different contexts during their life.

First, we transcribed the complete data verbatim, which resulted in 113 pages in 12-point type and 1.5 line spacing. Then we read the data several times to get an overview and understanding of the entire data and considered the women's narratives as a whole. The next step was to identify the content, which was the women's experience of unplanned OHDs, including what led to that situation and who helped them. Then we divided the various elements into themes: the woman's body, her newborn infant, and the other people who were around when she gave birth. These formed the blank levels of the narrative. The blanks were explored in more detail by asking questions about what happened, why, and what followed. The blanks were named inductively and formed into narratives. A common plot was identified in all the narratives and we then took individual narratives and linked them to each other. (Polkinghorne, 1995.) The data were analyzed by a single researcher (HJ) until the core elements were identified and subsequently synthesized in collaboration with all authors.

Trustworthiness

The question of trustworthiness was touched upon when recruiting the participants, collecting the data, during the narrative analysis process, and the reporting of the study. We recruited women who had had an unplanned OHD within the last five years and were willing to describe their experiences for research purposes. The data were collected until saturation and three more interviews were carried out to confirm saturation. We improved the trustworthiness of the study by describing the study process in detail and paying special attention to highlighting the women's stories and the researcher's reinterpretations of their experiences as part of the wider context (Polkinghorne, 1995). The transferability of the results is limited to target groups similar to that in our study, but the knowledge

we have provided can be used to understand women's experiences of unplanned OHD (Polkinghorne, 1995).

Results

The narrative analysis identified three different stories that described the women's experiences of unplanned OHDs and centered around the plot of sense of control. The context was the woman giving birth outside hospital, e.g., at home or in a car or ambulance, with the help of her husband, a paramedic, neighbor, or friend. Their sense of control was related to their experiences of their own body, the other people around them, and what happened after they had given birth.

First narrative: maintaining a sense of control

In the first narrative, the woman's sense of control was maintained while she was giving birth, with the help of others. The interviews revealed three key themes: 1) The woman trusted her own body, was aware of the changes in her body, and felt she could control the course of the birth. 2) The people involved in helping her to give birth made her feel safe and respected and listened to her feelings. 3) After the birth, the woman was pleased that she had successfully delivered her baby.

The woman felt more in control if she thought that she would arrive at the delivery unit before her baby was born. When childbirth began, she was calm and confident in her own body, but if the delivery was fast, the labor pains were hard and painful. She understood that the birth was progressing, and the birth of her baby child was near, but she saw the situation in a calm and natural way. The woman listened to her own body, and it guided her actions during childbirth. She sought positions that felt best to her and consciously focused on her body so that she could manage the contractions.

> *"I made a low sound. I felt that it calmed my breathing."*

> *"I trusted in my own body. I don't know if I had confidence in myself, but I did in my own body, because a woman's body is made for that job. If you let your body do the work, it will succeed… After all, the mind is usually the biggest obstacle to giving birth."*

Other people treated the woman with respect and took her feelings seriously which made her feel safe. The presence of other people was calming. Although she knew other people were around her, she focused on giving birth and they supported her in giving birth on her own terms. The woman was allowed to decide how the birth progressed, and she was grateful for their presence.

> *"It felt a bit like none of them had been involved in a birth before, but on the other hand, it didn't hurt. They were so calm, as if they trusted me... a bit like watching from the sidelines while I gave birth. Maybe they were scared, but I felt good about them."*

The woman trusted that everything would be well with her baby. She felt the baby's movements in her body and the effect that controlling her breathing had on labor. The woman believed that labor would be more difficult if the baby was not well. Her intuition was strengthened when she heard the baby crying, as she knew it was all right. After the baby was born, it was immediately placed in her arms, and she experienced great joy for herself and the baby. They had survived together, and she had successfully given birth.

> *"Somehow my own intuition told me that everything was fine. I put the baby on my chest, and we waited for the ambulance. We were fine."*

Second narrative: fluctuating sense of control

In the second narrative, the woman's sense of control changed as the birth progressed. She was aware of the process and knew that her body would tell her what to do. When she realized that she would not arrive at the hospital in time to give birth she knew that she had to survive the situation one way or another. The woman felt embarrassed, helpless, and alone, even though she was surrounded by others. She worried that she would not do the right thing after the baby was born.

There were three themes: 1) The woman was aware of the changes in her body and able to anticipate giving birth, but the speed of the delivery surprised her. 2) She felt embarrassed because other people were around her. 3) After the baby was born, she felt fear and uncertainty about whether she had done the right things.

The woman knew how to observe the changes in her body and the signs that she was in labor. When the contractions started, she waited calmly at home for her labor to progress. The woman assumed that she would go to hospital and give birth there once her labor had progressed sufficiently. She was surprised when her labor went more quickly than anticipated. Her will to survive meant she wanted to get to hospital, and she called the midwife and told her to expect her. The woman felt the intermittent contractions paralyze her body, but she managed for a while after the contractions

stopped. She knew how to get into positions that eased the pain and endured her labor pains as she knew she had no other choice.

> *"I called my husband and he said he was on the way. I said hurry, we've got to go to the hospital now, the baby will be born soon. I started to dress, and I walked outside to the carpark. The pain became so strong that it made me cry. It was the middle of the night, and it was so quiet everywhere."*

The woman knew she had to survive somehow. As the labor progressed, she continued to feel alone, which added to her sense of helplessness. As the birth approached, she wished she was at the hospital. She felt supported by the presence of her spouse or a neighbor, but their being there did not remove her uncertainty about the safety of giving birth. The woman saw the birth as a personal and important event for the family and she didn't want strangers there. She was disappointed that she had to share her birth experience with them. Her nakedness and the presence of male paramedics embarrassed her.

> *"All the paramedics were young men. I was so embarrassed. There are never women at work when they are needed."*

After the baby was born, the woman initially felt uncertain about whether she had done the right thing, and she was worried about her baby's health. When her baby cried, she knew it was alive and felt that everything would be fine. She felt great relief when her newborn infant was on her chest.

> *"The neighbor gave the baby to me just as the paramedics came in. There were so many people everywhere. I didn't really understand what had happened. I was lying on the floor half naked and thinking that luckily everything was over now."*

Third narrative: loss of control

The third narrative focused on the woman's loss of control. She felt uncertain and scared when she realized that she had to give birth outside hospital. Her insecurity affected her ability to focus on giving birth. Having other people around her weakened her sense of control, since they didn't know what to do and treated her with disrespect.

There were three key themes: 1) The woman felt uncertain about what was happening with her body. 2) The people around her did not take her seriously or underestimated her. 3) The events were difficult to internalize after the baby was born.

The woman wasn't sure if she was in labor and uncertain about the changes in her body. She hadn't expected the birth to progress so fast. The rapidly changing situation increased her fears for the future. The contractions were strong and painful, and she found it hard to find a good position and manage the pain. She felt that the pain was insurmountable.

> *"I Googled the criteria to see if the birth was in progress. I also called the midwife at the hospital, even though the criteria were not met, because it felt like it had started. I wanted to make sure that we didn't go to the hospital for nothing. I think everyone goes there too soon and it's kind of embarrassing... You don't want to go there until you're totally sure the birth is actually about to happen."*

Her control deteriorated when other people disregarded her will and feelings. She had to fight to make people listen to her. This increased the woman's feelings of insecurity. No-one told her what was happening and the whole situation felt chaotic.

> *"The paramedic just told me to stay still while he measured my blood pressure and blood sugar. He didn't understand that I didn't do it on purpose, that it hurt me and it was difficult. I felt like I was being told to be just like the paramedic wanted."*

Unfriendly behavior by the people around her weakened the woman's sense of control. Giving birth was a confusing experience and she wanted people to treat her in a friendly and humane way. Inexperienced paramedics were uncertain about what to do. The woman was not convinced that she and her baby would be helped properly. She watched the things happening around her and was scared. The woman wondered how it would all end and whether something would happen to her or her baby. She felt lonely and completely at the mercy of others.

The woman was concerned about her baby's well-being throughout the labor, and this increased her feelings of loss of control and insecurity. She couldn't be sure, at any point, that the baby was all right, and she could give birth safely.

> *"The paramedics did not know why they had to come there. When we talked afterwards, they said that they didn't know when they came that it was a delivery code."*

After the baby was born, the woman found it difficult to internalize the events. Everything had happened so fast, and her mind could not keep

up. She was so petrified that she could not function, and she just stared at her baby and the people around her. The woman thought that everything was unreal. She was dissatisfied with how she had given birth, but she was relieved that her baby was healthy.

> *"I was so disappointed and upset. I was lying somewhere along the highway in the back of the ambulance. I'd had high expectations for this birth."*

Discussion

Our results showed that having, or not having, a sense of control had a crucial impact on the woman's experiences of an unplanned OHD. This manifested itself in different ways, from maintaining a sense of control, to fluctuations and loss of control in relation to the woman's own body, the people around her during the delivery, and the situation after childbirth. The narratives show that the woman's awareness of her own body helped her to adjust to the events during childbirth. In contrast, any uncertainty increased the fear she experienced and led to a loss of self-control. The presence of other people played a major role in the woman's birth experiences, influencing her sense of security and increasing her certainty that it would be a successful delivery. Although the women stated that the birth of their child was a joyful occasion, the events that surrounded them affected their experience of childbirth.

This study elaborated on previous knowledge that experiencing a sense of control was a crucial element of a successful delivery (Chaibekava et al., 2022; Clews et al., 2020; Olza et al., 2018; Weng et al., 2023; Wu et al., 2022). Previous studies have highlighted that being able to plan their birth environment influenced women's sense of control during childbirth (Blondel et al., 2011; Cheung et al., 2007; Geerts et al., 2014). Studies have reported that women were mentally prepared to deliver in a safe hospital environment, assisted by professionals (Erlandsson et al., 2015; Flanagan et al., 2019; Ovaskainen et al., 2020). In contrast, women found that an uncertain birth environment and situation reduced their sense of control while they were giving birth and made it a negative experience. In particular, the fear of an unplanned OHD decreased their sense of control (Flanagan et al., 2019; Shorey & Ang, 2016; Turkmen et al., 2018). It is recognized that the delivery environment should be considered separately from the other experiences during the birth (Jarneid et al., 2020; Vik et al., 2016). This could help to identify factors related to the women's sense of control with regard to the unplanned OHD environment. The narratives in our study indicated that women who underwent unplanned OHDs were forced to reconsider their preconceptions and expectations regarding childbirth and to focus on the unexpected situation. It was noteworthy that the women's sense of control varied and unplanned OHDs did not always result in the same experiences. The context itself did not explain the women's sense of control, but it did reflect how their minds were able to adjust to the situation and how they felt the people around them treated them.

In our study, the woman's sense of control was related to her experiences of her own body and preparation to give birth. The narratives showed that being aware of what was happening to her own body helped the woman to approach the events during childbirth calmly. In contrast, uncertainty about her own body increased the fear she experienced and led to a reduced sense of control. In line with previous studies, the narratives emphasized the woman's right to self-determination and her ability to influence the course of the birth (Shorey & Ang, 2016). The experience of giving birth is related more to the woman's own choices, positive feelings and sense of being in control than to specific details (Cook & Loomis, 2012; Turkmen et al., 2018). The women who took part in our study actively participated in decision-making while they were giving birth. This enabled them to listen to their own bodies and act based on their own feelings.

The sense of control displayed in the narratives related to the women's ability to control their labor pain. This was crucial, since women who had an unplanned OHD did not have access to medical pain relief. They maintained their sense of control if they were able to relax and use their own methods of pain relief. In contrast, the women's sense of control decreased if they were unable to control the pain they experienced during childbirth, and this made their delivery a negative birth experience. Sufficient pain relief was important, since ensuring that labor pain is as tolerable and controllable as possible helps births to go smoothly and affects the woman's birth experience (Chajut et al., 2014; Cook & Loomis, 2012; Larkin et al., 2017; Shorey & Ang, 2016; Turkmen et al., 2018). Studies have shown that a significant part of a positive birth experience was the woman's ability to influence the course of the birth and pain control. In our study, the women felt that the support they received from other people and their attitudes and behavior toward them and their pain had an impact on their sense of control. This experience was similar when

professionals were present during labor (Shorey & Ang, 2016; Turkmen et al., 2018). A birth experienced positively has been shown to have a positive effect on the interaction between mothers and their children, as well as on their attitudes towards possible future pregnancies and births (Bossano et al., 2017; Larkin et al., 2017). Negative birth experiences have been linked to traumatic stress syndrome, postpartum depression, and fear of giving birth again (Garthus-Niegel et al., 2014). The narratives in our study showed that the women experienced the birth of their babies as a joyful event, but they could still experience disappointment with their own role during labor. This confirms previous findings, that a good birth experience includes the health and safety of the woman and her unborn child, but it also involves how the woman experiences giving birth (World Health Organization, 2018). A woman giving birth should be treated with dignity and given the opportunity to influence the course of her birth herself.

Despite the well-known risks of unplanned OHDs, they cannot always be avoided (Huotari et al., 2020). A regular labor can pose risks to the health of a woman and the unborn child, but an unplanned OHD causes experiences that can have a negative impact on the early interactions between a mother and her child and on how successful breastfeeding will be (Henriksen et al., 2017).

Facing a long or difficult journey to the hospital can make parents anxious (Hemminki et al., 2011). The aim of centralizing childbirth in Finland was to enable skilled maternity professionals to provide more efficient, high-quality routine and emergency care (Hanson & Schellenberg, 2019; Poeran et al., 2014). However, this might in fact cause medical and human suffering for individual patients (Huotari et al., 2020). If a mother lives a long way from the hospital where she plans to give birth, there is a risk that she may have to give birth on her own or with others around her. The primary goal is to ensure that the woman and her baby are medically safe and that she feels a sense of control and trust in her body during the delivery. This principle should be considered in maternity care practices, so that there is a progressive continuum from antenatal care to delivery (Hanson & Schellenberg, 2019). Doing this will mean that women experience the best possible preparation if they are faced with an unplanned OHD.

Conclusion

A woman's sense of control is a key factor in the birth experience. An unplanned OHD can be positive if the woman's sense of control can be preserved. Preparing for childbirth and making women aware of what is happening to their bodies during labor can strengthen their sense of control. The opportunity for women to participate in decision-making and influence the course of childbirth helps to maintain a sense of control. The presence of another person during childbirth was perceived as important in our study. The attitude and behaviors of the people involved in the birth affected the women's sense of control and how they felt about the birth experience. Ignoring women's feelings and restricting their activities made them feel negative about their birth experiences and fearful about possible future births. Feeling that they had a successful birth has been shown to have a positive effect on the early interactions between women and their newborn babies. Research is needed into how to ensure that women experience a safe delivery and how the people who are helping them can make it a positive birth experience when they have an unplanned OHD. However, high-quality, safe childbirth care may be difficult to implement when childbirth care professionals are not present.

Ethical aspects and conflict of interest

Research permission was granted by the organization that recruited the participants and the women who were interviewed provided oral, informed consent. According to the Finnish Medical Research Act (488/1999), non-invasive studies for autonomous and legally competent adult participants do not require an ethical committee review. We followed ethical research principles throughout the study and received research permission from the participating organization i.e., Emergency Medical Services. The women provided oral consent after they had been informed of the aim of the study, its voluntary nature, confidentiality and the anonymity of their participation and their right to withdraw at any point (Polkinghorne, 1995). We recruited participants via a nationwide organization to ensure that women had equal opportunities to participate the study. However, web-based recruitment may not have reached all potential participants. We reported the study honestly and openly (ALLEA – All European Academies, 2023) and the researchers consciously suppressed their own views and focused the research on the women's narratives (Lieblich et al., 1998).

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Author contributions

Conception and design (HJ, MK), data analysis and interpretation (HJ, AH, MK), manuscript draft (HJ), critical revision of the manuscript (HJ, AH, MK), final approval of the manuscript (HJ, AH, MK).

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