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Table of Contents

Copyright Notice ..... **i**

Editors ..... **ii**

An Anatomical Description of The Quranic Verse: Three Veils of Darkness in Surah Al Zumar **1**

Siti Rosmani Md Zin, Munirah Abd Razzak, Khadher Ahmad, Normadiah M. Kassim

Culture and Trade: Revisiting Smart Power in the Digital Age **13**

Rini Suryati Sulong and Hou Xiaoli

Parents' Experiences with Communication and Perception of Childcare Quality in Malaysia: A Mixed-method Study **25**

Ameerah Abdul Azmil, Venisry a/p Periasamy Gnana Sambathar, Auni Hanisah Mahadzir, Nurhanani Ahmad Shakri and Lihanna Borhan

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An Anatomical Description of The Quranic Verse: Three Veils of Darkness in Surah Al Zumar

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ABSTRACT

Human development is a complex process discussed in many texts, including the Qur'ān. One of the verses describing human embryology is Surah Al-Zumar, 39:6 (…He creates you in the wombs of your mothers: creations after creation in three veils of darkness…). Exploring the different anatomical aspects when translating Qur'ānic terms is essential. These nuances often carry unique interpretations and perspectives worth examining, revealing deeper layers of meaning not fully captured in traditional translations. This manuscript aims to present a biological perspective in translating the phrase or terms "three veils of darkness" used in the Qur'ānic verse with appropriate anatomical terminologies. The sources for this article include the Qur'ān, Hadiths, and published literature. Some Arabic words in the cited verse are elaborated from a slightly different biological perspective compared to available translations. In this manuscript, the "three veils" mentioned in surah Al-Zumar are defined as the uterine, chorionic, and amniotic cavities. By refining and expanding the anatomical correlates of each "veil," this study intends to offer a clearer and more precise interpretation that builds upon and improves the original hypothesis, while maintaining its original context and significance across different linguistic settings. This additional viewpoint on the links between Qur'ānic words and modern anatomical terms highlights the remarkable language of the Holy Book, bestowed upon us by Allah the Almighty.

Keywords: *Veils of darkness, Qur'ān, Al-Zumar, uterus, human embryology*

INTRODUCTION

The Qur'ān has been proven to accurately describe the stages of human development, including fertilisation, implantation and organogenesis (Zaheer, 2016). Islamic scholars and well-known scientists have explored and described all human developmental stages mentioned in the Qur'ān (Khattak et al., 2006; Ahmad, 2024). There are 10 verses from the Qur'ān associated with embryological development. Among these, a verse from Surah Al-Zumar, 39: Verse 6 is selected for further review:

يَخْلُقُكُمْ فِي بُطُونِ أُمَّهَاتِكُمْ خَلْقًا مِنْ بَعْدِ خَلْقٍ فِي ظُلُمَاتٍ ثَلَاثٍ

This verse is chosen due to the inconsistency in its interpretation and the terminology used by earlier scholars. This review also aims to provide a different perspective by associating the words of the Qur'ān with suitable anatomical terms. The Qur'ān is a sacred scripture from

the Almighty, with specific terminologies selected by Allah that carry meanings and explanations. Therefore, translating the original Arabic words from this revered book is not just a simple language conversion. In fact, most translations depend on Qur'ān exegeses alongside the linguistic skills of the translators (Al-Azzam et al., 2015).

The interpretation of the verse in Surah Al-Zumar presented in this study aligns with the earlier work of Hassanein (2015). Hassanein justified his interpretation of the "three dark zones" as the uterine, chorionic vesicle, and amniotic cavities, emphasising the importance of these cavities in supporting normal embryological development through the absence of light within them. Meanwhile, the present work provides a more detailed clarification by incorporating embryological and anatomical insights into these structures. Nonetheless, it is hoped that the discussion offered in this review will encourage further exploration of the Qur'ān, which continuously amazes us with its contents.

METHODOLOGY

Apart from the Qur'ān, Hadiths, and relevant books, articles describing the key area of interest were collected from various databases and published sources. The approach was to retrieve all pertinent references by searching for citations or established writings that contain the following keywords: "human embryology and Al-Qur'ān" (Title/Abstract), or "Three veils of darkness" (Title/Abstract), OR "Three darknesses and Al-Qur'ān" (Title/Abstract). Additional information was obtained using a combination of the keywords "ظُلُمٰتٍ" and "بُطُوْنِ" in the Qur'ān and Hadiths. The selected Qur'ānic verse and Hadiths were reviewed and approved by two authors of this manuscript, experts in Qur'ān and Hadith studies, respectively. Suitable references were identified by examining the titles and abstracts, and some references cited by the sources were further explored for supplementary information.

AL-QURAN AND EMBRYOLOGY

The Qur'ān was revealed to humanity more than 1400 years ago and is said to contain scientific knowledge across various fields (Anwar and Ansar, 2018; Rehman, 2003). The fact that the Qur'ān appeared when the Arabs lacked modern devices or technology strongly supports the idea that this revelation came from Allah S.W.T (Mir, 2019).

Furthermore, it was given to a man widely known to be illiterate and lacking formal education. This demonstrated that the Qur'ān was revealed by the Almighty through Prophet Muhammad (peace be upon him), opening doors to the pursuit of knowledge. Additionally, early historical sources about Prophet Muhammad's (peace be upon him) life highlighted and emphasised the integrity of his character. The idea that he plagiarised Hellenic embryology while claiming the Qur'ān as the word of God is implausible (Tzortzis, 2011a). There are several reasons for this. For example, his enemies even recognised him as the "Trustworthy" (Lings and Barrett, 1983). Furthermore, many claims made by the ancient Greeks have been proven incorrect and are not present in the Qur'ān. For instance, Aristotle's idea that fertilisation results from a mixture of semen and menstrual blood is not reflected in the Qur'ānic text (Tzortzis, 2011b).

The Qur'ān revelation enabled researchers and Muslim scholars to comprehend different stages of human development. These facts were later confirmed by scientists, including the modern embryology expert Professor Keith Moore and other non-Muslim

scientists (Mohsen et al., 2011; Ansari, 2001). Every event described in the Qur'ān consistently contains specific details in its words or expressions. For example, Surah Al-Mu'minūn, 23: Verse 12-14, was examined in detail a decade ago, revealing Allah the Almighty's unmatched knowledge.

We created man from a quintessence of clay. Then we placed him as a drop of sperm in a secure resting place. Next, we transformed the sperm into a clot of congealed blood; from that clot, we formed a lump of flesh; afterwards, we shaped bones from that lump and clothed them with flesh; finally, we developed another creature from it. So, blessed be God, the best of creators (Ali, 2016).

Apart from Surah Al-Mu'minūn, Surah Al-Zumar 39: Verse 6 is another verse that mentions embryology or human development.

SURAH AL-ZUMAR

خَلَقَكُمْ مِنْ نَفْسٍ وَاحِدَةٍ ثُمَّ جَعَلَ مِنْهَا زَوْجَهَا وَأَنْزَلَ لَكُمْ مِنَ الْأَنْعَامِ ثَمَانِيَةَ أَزْوَاجٍ ۚ يَخْلُقُكُمْ فِي بُطُونِ أُمَّهَاتِكُمْ خَلْقًا مِنْ بَعْدِ خَلْقٍ فِي ظُلُمَاتٍ ثَلَاثٍ ۚ ذَٰلِكُمُ اللَّهُ رَبُّكُمْ لَهُ الْمُلْكُ ۖ لَا إِلَٰهَ إِلَّا هُوَ ۖ فَأَنَّىٰ تُصْرَفُونَ

(Qur'ān: Surah Al-Zumar, 39: Verse 6)

He created you all from a single person, then made, of similar nature, his mate; and He sent down for you eight heads of cattle in pairs. He develops you in your mothers' wombs in stages, one after another, within three veils of darkness. Such is God, your Lord and Cherisher: to Him belongs all dominion. There is no god but He; then how are you turned away (from your true Centre)?" (Ali, 2016).

For this review, we will focus only on the part that contains the biological terms:

يَخْلُقُكُمْ فِي بُطُونِ أُمَّهَاتِكُمْ خَلْقًا مِنْ بَعْدِ خَلْقٍ فِي ظُلُمَاتٍ ثَلَاثٍ ۚ

Indeed, the words of the Qur'ān are of a higher level of quality. They are consistently elaborated upon by earlier Islamic scholars, which is later supported by modern scientific knowledge. Surah Al-Zumar 39: Verse 6 is no exception, but it is noted that the translations and explanations of this part of the verse have slight variations.

Other English translations of this verse are as follows:

> ….. He creates you in the wombs of your mothers, a creation after a creation, in triple darkness.…. (Shakir, 2014).
>
> ..… He creates you in the wombs of your mothers, creation after creation, within three darknesses.…. (http://quran.com/39/6-16?translations=20).

English translations define the word "بُطُونِ" (*butun*) as womb (uterus) and belly. In Bahasa Melayu and Indonesia, it was translated as "*perut*" or belly:

> …… Dia menciptakan kamu di dalam perut ibu-ibu kamu dalam keadaan suatu ciptaan sesudah sesuatu ciptaan dalam kegelapan yang tiga ……(Amrullah, 2017).

….. Dia (Allah) menjadikan kamu dalam perut ibumu, kejadian demi kejadian dalam tiga kegelapan ..… (Nasution, 2020).

These Malay and Indonesian translations of the verses refer to the creation of a human being within the mother's "*buṭūn*", which is translated as "*perut*", meaning belly. The environment of the belly where the stages of creation occur is described as three darknesses. This contrasts with the English translation that defines the word "*buṭūn*" as a womb. Therefore, further discussion on this matter is necessary to understand and clarify the meaning of the words "*buṭūn*" and its connection to the mention of the three darknesses in the Qur'ān.

The term "بُطُوْنِ"

Many verses in the Qur'ān that contain the word "بُطُونِ". Some of these verses are translated as 'belly' and others as 'womb', depending on the context of the verse (http://holyquran.site/#1:1).

A more detailed linguistic analysis of the triliteral root ب ط ن (bā ṭā nūn), which appears 25 times in the Qur'an, provides additional context for the interpretation in this study. This root appears in five derived forms: twice as the verb بَطَنَ (baṭana) and twice as the noun بُطْنَة (biṭānat). Additionally, it is mentioned 17 times as the noun بَطْن (baṭn), three times as the active participle بَاطِن (bāṭin), and once as بَاطِنَة (bāṭinat). Notably, بَطْن (baṭn) frequently refers to the inner part of something, such as a valley's interior or the womb, highlighting the concept of inner depth or concealment. This semantic pattern aligns with the interpretation of the "three veils of darkness" as anatomical layers that enclose and conceal the developing embryo. Recognising how the Qur'ān consistently uses this root to signify inwardness, and internality underpins the relevance of this term to embryological contexts and supports the proposed interpretation.

The word "بُطُونِ" was also mentioned in a Hadith recorded by al-Bukhārī and Muslim in their Sahih books. Translation of certain parts of the Hadith is as follows:

On the authority of Abū 'Abd al-Raḥmān 'Abdullāh ibn Mas'ūd (may Allah be pleased with him), who said: The Messenger of Allah (peace be upon him), and he is the truthful, the believed, narrated to us:

Translation: Verily, each of you is brought together in his mother's abdomen for forty days in the form of a drop of fluid. Then it is a clinging object for a similar period. Thereafter, it is a lump looking like it has been chewed for a similar period. … (Narrated by al-Bukhārī, hadith number 6594).

The Arabic word used in this hadith is "*butūn*" or "بُطُونِ", which was translated as 'abdomen'. However, in other narrations, the word "*al-Raḥīm*" or "womb" is used. The word "womb" is closely connected to "*raḥmah*", which means mercy, illustrating the association of mercy towards kin. The Prophet (peace be upon him) said:

Translation: Verily, the womb (al-Raḥīm) has taken its name from al-Raḥmān (the All-Merciful). Allah has said, 'Whoever maintains your ties, I shall maintain his ties. Whoever cuts you off, I shall cut him off' (Narrated by Aḥmad, hadith number 1659).

Lisān al-ʿArab, one of the most comprehensive dictionaries of the Arabic language, authored by the philologist, historian, and Islamic scholar Ibn Manẓūr (died 1311 CE / 711 AH), interprets "بُطُونِ" as the plural form of "بَطَنَ," which means "was hidden." The dictionary

also describes the word as "became big, distended or inflated," aligning with the increase in size of the uterus during pregnancy. According to the Modern Arabic Writing dictionary, "بُطُونِ" or "بَطَنَ" signifies belly, stomach, abdomen, womb, interior, inside, or inner portion (Milton, 1974). It also defines "فِي بُطُونِ" as inside, within, or in. Referring to the subsequent part of the verse, which explains the stages of development (creation by creation) occurring in the "بُطُونِ" of your mothers, we understand that "بُطُونِ" in this context refers to the "interior of" the womb or uterus, the specific site of development.

According to a *mufassir* like Ibn Kathīr (1999), the three layers of darkness represent protection and concealment within the mother's womb. They highlight the complexity and mystery of human creation, which only Allah fully understands. Al-Qurṭubī (n.d.) notes that these three layers serve as an essential form of protection for the foetus. The darkness is not merely physical but also symbolises the stages of creation that occur secretly and are entirely under Allah's control.

A more detailed commentary by Al-Ṭabarī (1968) affirms that the "three layers of darkness" are both literal and symbolic, representing physical layers and the mystery of the creation process, which is entirely under the command of Allah. Meanwhile, al-Zuhaylī (1991) states that Allah (SWT) initiated the creation of human beings and shaped their development in the womb through distinct phases. Initially, the human begins as a sperm, then progresses to the stage of ʿalaqah (a blood clot), followed by muḍghah (a lump of flesh). Subsequently, bones start to form, later covered with flesh, veins, and nerves. Ultimately, the spirit is infused, completing the transformation into a perfect human being. This creation occurs within three layers of darkness, identified as the darkness of the stomach, the uterus, and the darkness of the placenta.

The Qur'ān uses the word بُطُونِ (the plural of بَطَنَ) to describe where human development occurs. This refers to the uterus and aligns with what modern science has verified about pregnancy. Interestingly, this was revealed in the 7th century, long before scientists had a comprehensive understanding of the womb and foetal development. Although ancient physicians like Hippocrates (in the 5th century BCE) and Galen (in the 2nd century CE) described the womb (Saadat, 2009; Singer and Rosen, 2024) and the membranes surrounding the foetus, not everyone agreed with them. For example, Aristotle had a different and incorrect view on how babies form. The Qur'ān, however, accurately describes the concealed, dark environment of the womb called "three veils of darkness," which we now understand as the uterine, chorionic, and amniotic cavities.

In fact, it is scientifically established that normal human implantation and development take place within the uterus, the exclusive organ of females. The developmental process encompasses pre-embryonic, embryonic, and foetal stages (Yahya, 1994; Sadler, 2012; Moore, 2013). This indicates that the Qur'ānic description of human development was scientifically precise and was revealed long before modern discoveries confirmed it.

Three darknesses

It is also interesting to note that "human development occurs in stages within three darknesses" was mentioned following the statement of "inside the womb of your mothers". Therefore, the translation of the word "ظُلُمَٰتٍ" in the verse should be closely associated with the cavity of the uterus.

All this while, "فِى ظُلُمٰتٍ ثَلٰثٍ" has been translated into English as "in three veils of darkness," "within three darknesses," "in threefold of darkness," or "*di dalam tiga kegelapan*" (in Bahasa Melayu). In the Qur'ān, the word "ظُلُمٰتٍ" is mentioned multiple times, and all references share the same context of "ظُلُمٰتٍ," which refers to a situation or environment lacking light, whether it be faith or physical light. None of the verses translate "ظُلُمٰتٍ" as structures (e.g., layers or coverings). However, some "*Tafsīr* (further explanation)" for verse 6 of Surah Al-Zumar interpret the word darknesses as three structures: namely, the abdominal wall, uterine wall, and amnio-chorionic membrane (Moore, 1982; Syed, 1987; Syed, 2003; Ahmed, 2006; Saadat, 2009), or the amnion, chorion, and decidua (Mohamed, 1999; Mahdi et al., 2012). The three veils are also likely to refer to the belly, womb, and the cavity enclosing the womb (Lane, 2005).

Besides structures, the three darknesses were also believed to symbolise the three trimesters of pregnancy (Sayska and Arni, 2016). However, this contradicts the definition of darkness itself, which is described as a dark situation, area, space, or cavity. It is also important to note that the three darknesses are mentioned alongside the stages of human creation. This verse aligns with the spaces or cavities closely connected to different stages of prenatal development. Undoubtedly, previous Qur'ānic researchers have also referred to the "three darknesses" as cavities, namely, the pelvic, uterine, and amniotic cavity (Ali, 2016; Amrullah, 2017).

The discussion on "فِي ظُلُماتٍ ثَلاثٍ" in the book of "*Sharh* al-Hadith" (Hadith explanation) refers to the two hadiths narrated by al-Bukhārī, (hadith numbers 6594 and 6595), which describe the process of human creation from semen in the mother's womb until the soul is blown by Allah SWT (Al-Bukhārī, 8: 122). Consequently, Imam al-Bukhārī placed these two hadiths in Kitab al-Qadar, Chapter 1, indicating that they relate to the discussion of the process of human creation. As Ibn Ḥajar explained regarding the main title (Kitāb al-Qadar), it shows that everything does not happen but is preceded by the knowledge of Allah and His will (Ibn Ḥajar, 11: 481). Later, Ibn Ḥajar, in Fatḥ al-Bārī, again mentions that the phrase "فِي ظُلُماتٍ ثَلاثٍ" refers to the darkness of the placenta, the darkness in the womb, and the darkness in the abdomen (Ibn Ḥajar, 11: 481). These are described as the three darknesses, likely because the placenta is in the womb, within the abdomen.

However, as noted in the previous paragraph, the cavities should be found in the specific organ related to the stage of human development (i.e., the uterus) based on an anatomical view of the verse studied. Therefore, it is very likely that the three dark cavities are the uterine, chorionic, and amniotic cavities. This is also supported by the fact that all three cavities develop simultaneously during the early embryonic and foetal development stages within the uterus.

Uterine cavity

Development begins after successful fertilisation, which occurs in the ampulla of the uterine tube. The fertilised ovum, known as a zygote, undergoes a series of mitotic divisions; during these divisions, the daughter cells become smaller (blastomeres). This series of cell divisions is called "cleavage" (Sadler, 2012). As cell division progresses, a 16-cell blastomere mass is propelled towards the uterus. The blastomeres form a compact ball called a morula, just as it enters the uterine cavity around the fourth day after fertilisation. When the morula enters the uterine cavity, it sheds its protective coat, enabling the formation of the next developmental stage, the blastocyst. Blastocyst formation is a prerequisite for the process of implantation into the endometrium (Moore, 2018).

The uterine wall consists of three layers: the inner layer (endometrium), the middle layer (myometrium), and the outer layer (perimetrium). Implantation of embryos occurs in the endometrium (Figure 1). During pregnancy, the endometrium undergoes decidualisation, whereby the endometrial cells transform into highly specialised cells under the influence of progesterone. The modified endometrium, known as the decidua, later becomes part of the maternal component of the placenta. The decidua persists throughout pregnancy and is shed during childbirth. It is divided into three parts: i) decidua basalis, the part of the endometrium that supports the growth and development of the placenta; ii) decidua parietalis, the part that extends over the embryo on the cavity side; and iii) decidua capsularis, which continues with decidua basalis to encapsulate the embryo and the amniotic cavity (Sadler, 2012).

During pregnancy, the uterine cavity is the space between the decidua parietalis and decidua capsularis. This space later decreases and nearly disappears as both decidua fuse together, and the foetus gradually enlarges from the fourth month of pregnancy.

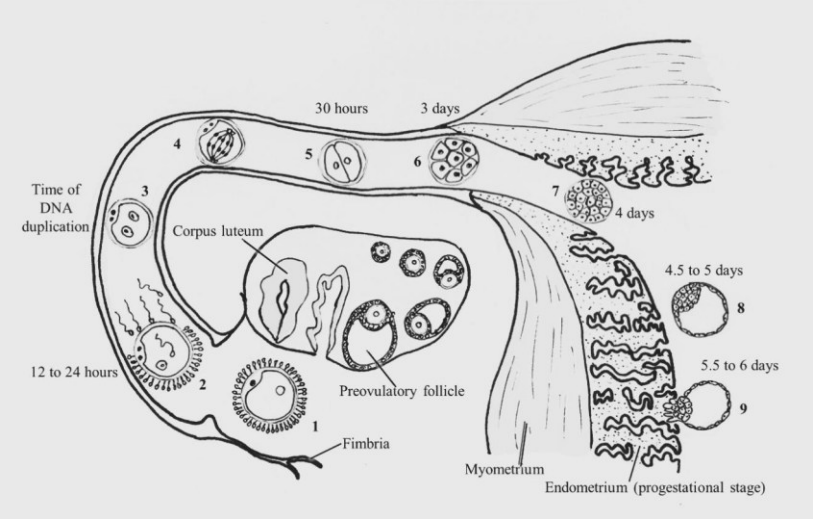

Figure 1. Events during the first week of human development. 1) The oocyte immediately after ovulation, 2) Fertilisation in the ampulla, 3) Pronuclei, 4) Spindle of the first mitotic division, 5) 2-cell stage, 6) Morula, 7) Advanced morula, 8) Early blastocyst, and 9) Early phase of implantation (Sadler, 2012; Moore et al., 2013).

Chorionic cavity

Once fertilisation is successful, a conceptus forms, encompassing all structures derived from the zygote, both embryonic and extraembryonic. As the conceptus enlarges, a vascular network begins to develop between the mother and the foetus. This process involves the differentiation of the blastocyst into an outer cell mass, which will become the trophoblast, and an inner cell mass, which will develop into the embryoblast. The trophoblast then further differentiates into cytotrophoblast and syncytiotrophoblast (Sadler, 2012).

By the 11th to 12th day of development, the blastocyst is fully embedded in the endometrial stroma. At the same time, cells of the syncytiotrophoblast penetrate further into the endometrial stroma and erode the endothelial lining of the maternal sinusoids. As a result of ongoing erosion, the maternal sinusoids connect with the syncytial lacunae. Maternal blood then enters the lacunar system and eventually establishes the uteroplacental circulation (Figure 2) (Sadler, 2012; Moore, 2013).

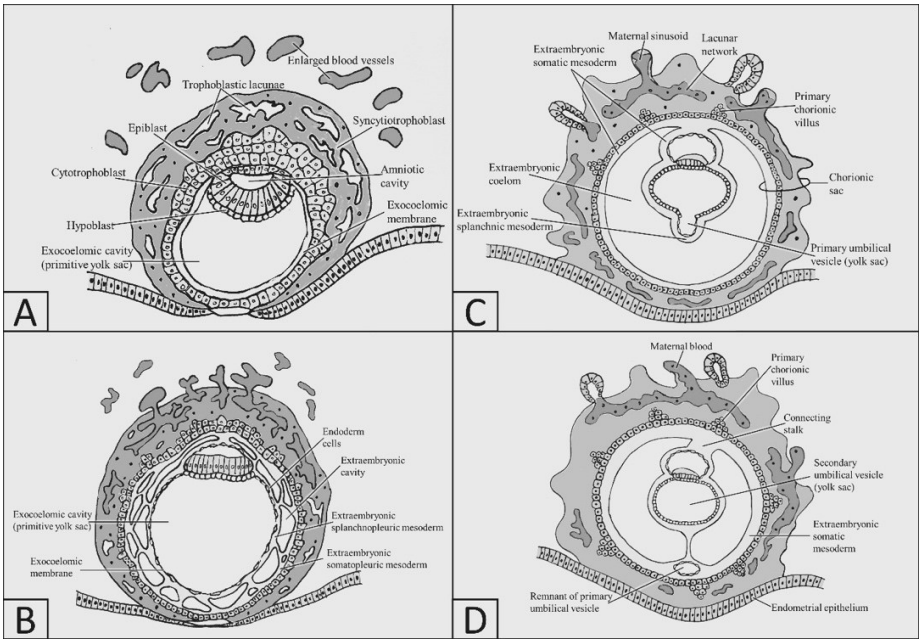

Figure 2. A) Day 8, B) Day 9, C) Day 13, D) Day 14 of development (Sadler, 2012; Moore et al., 2013).

Meanwhile, the extraembryonic mesoderm develops between the trophoblast externally and the amnion and exo-coelomic membrane internally. Soon after, large cavities form in the extraembryonic mesoderm that later merge to create the extraembryonic cavity, also known as the extraembryonic coelom or chorionic cavity (Figure 3) (Sadler, 2012). This fluid-filled cavity surrounds the amnion, which is the innermost membrane enclosing the amniotic cavity, and the umbilical vesicle. The extraembryonic coelom divides the extraembryonic mesoderm into the extraembryonic somatic mesoderm and the extraembryonic splanchnic mesoderm (Figure 2). The extraembryonic somatic mesoderm and the two layers of trophoblast together form the chorion. The chorion creates the wall of the chorionic sac, within which the embryo, the amniotic sac, and the umbilical vesicle (yolk sac) are suspended by the connecting stalk. The extraembryonic coelom is later called the chorionic cavity (Sadler, 2012).

Amniotic cavity

As the implantation of the blastocyst progresses into the endometrial stroma, the cells of the inner cell mass or embryoblast differentiate to become a double-layered germ disc, consisting of the epiblast and hypoblast. These germ layers are collectively referred to as the bilaminar germ disc. As development continues, a small cavity then appears within the epiblast, which later enlarges to form the amniotic cavity (Figure 2) (Sadler, 2012).

The amniotic cavity is a sealed sac that contains amniotic fluid, which surrounds and cushions the developing embryo. As the amniotic fluid increases in volume, it causes the amnion to expand and stick to the inner surface of the chorion, thereby obliterating the chorionic cavity (Figures 3) (Sadler, 2012).

These three cavities (uterine, chorionic and amniotic cavities) surround the developing embryo, and their sizes change correspondingly with the stages of the developing human (Figure 3). This is consistent with the Surah Al-Zumar, 39: Verse 6:

Translation: He creates you in the wombs of your mothers, in stages, one after another, in three veils of darkness…. (Ali, 2016)

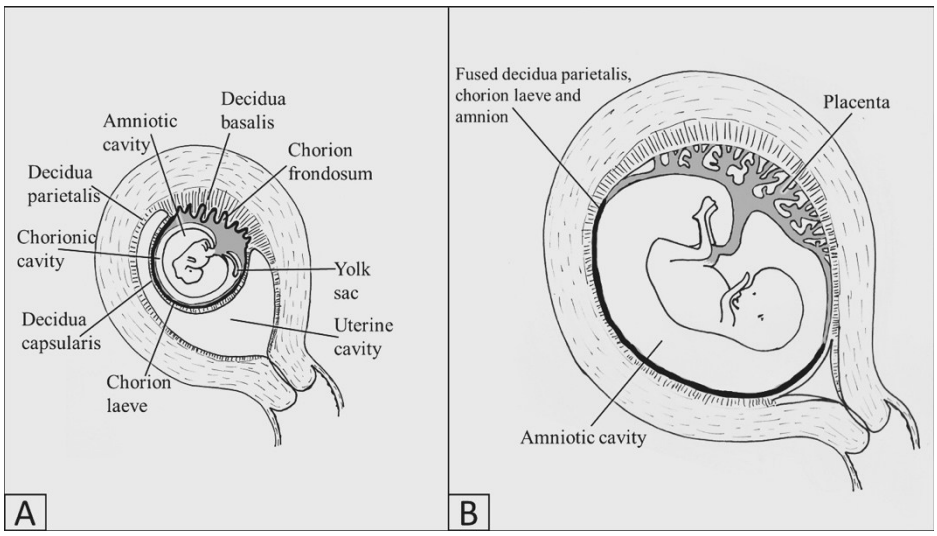

Figure 3. A) End of the second month. Note the uterine, chorionic and amniotic cavities. B) End of the third month of development. At this stage, the chorion and the amnion have fused, obliterating the uterine cavity due to fusion of the chorion leave and the decidua parietalis (Sadler, 2012; Moore et al., 2013).

The plausible interpretation of the three regions of darkness mentioned in Surah Al-Zumar aligns with the explanation provided by Hassanein (2015), which is the only reference sharing our opinion. Hassanein (2015) also observed that the Qur'ān was highly precise in describing the stages of creation passing through three dark zones: the cavity of the uterus, the cavity of the chorionic vesicle, and the amniotic cavity (Hassanein, 2015). These three zones only existed during the embryonic stages and disappeared after their completion.

The presence of various explanations of the verse highlights the extraordinary language of the Qur'ān, which aligns with scientifically validated modern embryological knowledge. Indeed, only Allah knows the precise meaning of every word in the Qur'ān, as stated in the Surah Al-An`ām verse 6: Verse 59.

Translation: He alone has the keys to the unseen treasures, which no one knows except Him. He knows whatever is in the land and the sea; there is not a single leaf that falls without His knowledge, there is neither a grain in the darkness of the earth nor anything fresh or dry which has not been recorded in a Clear Book.

CONCLUSION

The term "three veils of darkness" most likely refers to the uterine, chorionic, and amniotic cavities that develop simultaneously during the formation of the early embryo into a foetus within the uterus. The interpretations of the studied verse in Surah Al-Zumar by the authors were sincerely made to enrich existing interpretations by previous scholars. It is not the authors' intention to dismiss other opinions regarding this verse. Nevertheless, we should explore and properly understand this religious scripture to benefit human knowledge.

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Culture and Trade: Revisiting Smart Power in the Digital Age

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ABSTRACT

This article explores how cultural trade can serve as a form of 'smart power'. We examine how globalisation has developed to amplify the influence of digitalisation in the exchange of both tangible and intangible goods, thereby boosting cultural trade. We review how a nation's cultural identity has been constructed and understood through a conceptual synthesis. This article investigates how a nation utilises the medium through which its culture is shared and considers the extent of its influence. We argue that although a nation's cultural identity may be exchanged as tangible and intangible cultural products across borders, the underlying values and implicit assumptions of these artefacts are not always communicated as intended. Consequently, we seek to explore the role of advancements in telecommunications and digital technologies in shaping cultural identities and state power. From our analysis, while digital technologies enable quicker access and broader audience reach, digitalisation may not yet fully capture the nuanced understanding required for accurate cultural exchange. In this context, if a nation can effectively leverage digital technology to disseminate the cultural norms and values associated with its cultural products, then, and only then, can it utilise 'smart power' to influence public opinion and manoeuvre international relations to its advantage.

Keywords: *Cultural trade; Soft power; Smart power; Cultural influence*

INTRODUCTION

In the 21st century, the digital age has transformed communication, commerce, and the way identities and relationships are formed. The advancements in telecommunications and digital technologies influence public opinion, cultural identities, and state power.

Culture encompasses many aspects of national identity, from intangible elements like language to tangible items such as jewellery and architecture. The trade of goods and services of cultural significance is a relatively ancient concept but has gained importance over time. According to Frey and Pommerehne (1987), "international art trade is not a new phenomenon but has existed since the very beginning of art" (p. 465). What has changed is how it is perceived and evaluated. In the words of Siehr (2005):

> *In ancient times, people traded goods that today would qualify as cultural objects but were then common items of daily life (e.g., pottery), of aristocratic lifestyles (e.g., jewellery, statues for gardens), or of funeral customs (e.g., urns, sarcophagi). [...] Their trade was part of broader commercial relations across the whole ancient*

> *world. [...] Art trade as a specialised profession is a relatively recent development. (p. 1069)*

The cultural industry developed rapidly after World War II, following the advent of the third industrial revolution and increased global trade integration. This led to a rise in the use of electronics in telecommunications, production, and transportation, making the movement of goods and services more efficient. As a result, international trade in cultural products attracted the interest of many scholars and researchers.

The relationship between culture and economics, along with the evolving concept of cultural trade, moved to the forefront of academic discussion in the late 1980s. Scholars such as Frey and Pommerehne (1987) examined concerns about international trade in art from economic and psychological perspectives. Other important early works on culture and trade included Marvasti's (1994) cross-sectional analysis of international trade in cultural goods, Frey's (1997) economic approach to assessing cultural property, and Galperin's (1999) study of the development of cultural industries in the context of regional integration and trade agreements.

Studies have emphasised the growing importance of cultural trade in promoting economic growth and influencing international relations. Statistics from the UN Trade and Development (UNCTAD), as reported by Li Xin (2021), indicated that global cultural trade expanded at an annual rate of 5.3% between 1994 and 2002. Additionally, the total volume of global cultural trade increased from 98.314 billion USD in 2000 to 138.638 billion USD in 2018, representing a growth of 41.02% (Li, 2021). During this period, the United States of America (US), the United Kingdom (UK), and Germany consistently ranked among the top ten, reflecting their dominance in cultural trade worldwide. For instance, in 2018, the total cultural trade volume of the US, UK, and Germany was 26.145 billion dollars, 15.803 billion dollars, and 12.926 billion dollars, respectively, accounting for 39.58% of the global cultural trade volume that year (ibid.).

It is also noteworthy to mention that China has climbed the ranks significantly over the past decades. The popularity of China's pop culture may have been strongly influenced by its substantial growth in cultural trade during this period. For example, according to an analysis by Li Xin (2021), China's total cultural trade volume increased from 1.831 billion dollars in 2000 to 9.927 billion dollars in 2018, ranking 13th in 2000, 6th in 2008, and 4th in 2018, showing significant growth both in rank and trade volume. This was further emphasised in an article by Yecies, Keane, Yu, Zhao, Zhong, Leong and Wu (2019), stating that China's government is heavily investing in digital innovation, where it is "most evident in the trailblazing presence of Chinese digital and telecommunications companies in the domestic market and also abroad." (p. 205).

Conceptualising Cultural Trade

Before engaging in any discussion on cultural trade, we must first identify what kinds of products and services are included under the term 'cultural products'. This is not an easy task. The very concept of 'culture' is already broad and subjective, shaped by a society's values, attitudes, and unspoken assumptions; therefore, the criteria for classifying cultural products are also wide-ranging, covering both tangible items like paintings and buildings, as well as intangible assets like language.

According to the UNESCO Institute for Statistics (n.d.), cultural goods are consumer products that convey ideas, symbols, and ways of life, such as books, magazines, multimedia products, software, recordings, films, videos, audiovisual programmes, crafts, and fashion (UIS, 2009). UNESCO has also stated that cultural products include goods and services related to the arts (performing, visual, architecture), heritage conservation (museums, galleries, libraries), the cultural industries (print media, broadcasting, film, recording), and festivals. This represents a very broad range of goods and services, covering a wide area of trade.

Scott (2004), along with other scholars (e.g., see Schreiber, 2017; Scott, 2017) in the field of cultural economy, describes cultural economy (or the cultural-products industry) as sectors that provide service outputs centred on entertainment, edification, and information, as well as manufactured products through which consumers create distinctive forms of individuality, self-affirmation, and social display (p. 462). Some examples of products and services falling under this broad classification include print media, recorded music, films, clothing, and jewellery. Broadly speaking, the cultural economy involves "the creation of products whose value rests primarily on their symbolic content and how it stimulates the experiential reactions of consumers" (Power & Scott, 2004, p.3). Additionally, some scholars have emphasised the significance of "ideas" and "image" in defining and categorising cultural products. For example, in a study by Liu, Li, Tao, and Wang (2024) on intangible cultural heritage, they argued that "image", which refers to an individual's ideas and impressions of an object, plays a vital role in defining the meaning and "authenticity" of intangible cultural heritage.

Based on a report published in "The WTO: Legal, economic and political analysis", conceptualising cultural trade and labelling of cultural goods are among the fundamental issues revolving around culture and international trade (see Appleton & Pummer, 2007). There has been a long history of conflicts on the global stage related to cultural products, including their significance and influence on cultural expression and national cultural industries deemed crucial for a nation's socio-economic development (Bernier, 2005). For instance, the definition of the attributes of cultural products became one of the main points of contention in the "China-US Audiovisual Services Trade Dispute". Among other developments in the industry, against the backdrop of escalating geopolitical conflicts, the field of international cultural trade and investment has witnessed a shift from offshore production to onshore production, and from offshore outsourcing to friend-shoring and nearshoring. This has also consequently impacted the global flow of cultural trade (Hua & Tian,2024).

Nevertheless, with the rapid pace of globalisation, trade in cultural goods and services worldwide now occurs not only in physical form but also digitally. This includes the sale of art, the dissemination of beliefs, traditions, and customs through films and literature, and the movement of artists and performers across borders. For instance, the widespread use of social media has enabled every one of us to post information and sell items identified earlier as cultural goods and services. Therefore, the scope of cultural trade has certainly expanded to include the digital exchange of ideas, and its impact has become more significant.

Take China, for example. According to the "Annual Report on China's Digital Publishing Industry 2022-2023: China's Digital Publishing Moving Forward with Determination" published by the China Academy of Press and Publication, the total revenue of China's digital publishing industry in 2022 reached 1.358699 trillion yuan, an increase of 6.46% compared to the previous year. Of this, online comics contributed 33.094-billion-yuan, mobile publishing (including only mobile reading) 46.352-billion-yuan, online games 265.884 billion yuan, online education 262 billion yuan, and digital music 63.75 billion yuan. China is

becoming one of the world's major markets for digital content. The "2021 Mobile Games Going Global Insight Report," jointly published by Google and App Annie, revealed that in the 2021 overseas mobile game market, Chinese mobile games accounted for 23% of user spending. This ended the dominance of Japanese games and established China as the global leader.

In another example of the growing influence of cultural trade, it was reported by the Canada Council for the Arts (2024) that Canada exported $24.5 billion worth of cultural products in 2022, an increase of 8.6% from the previous year. Among the top five countries receiving their exports, the US remains their largest trading partner. In terms of both cultural exports and imports for Canada, crafts, written and published works, and audio-visual and interactive media have contributed most to this growth.

What can be discerned from the discussion above is the complex, and often confusing, nature of identifying, defining, and categorising between tangible and intangible cultural goods and services. With the influx of technology and digitalisation of products, the issue of ownership of cultural products becomes a concern and a source of conflict for some.

Where Does Culture Influence State Power

Cultural trade has received increased attention in the 21st century due to its capacity to influence not only economic growth but also social, political, and cultural relations between nations. In a speech during the "20th Seminar on International Security, Politics and Economics" in 1999, Renato Ruggiero, the WTO Director-General at that time, stated:

> *"More and more, we are facing issues and concerns which go beyond the parameters of trade. More and more, globalization is raising a whole new set of questions about how to manage interdependence. [...] Can we preserve cultural identities in an age of borderless communications?" (12 April 1999)*

As cultural goods and practices spread globally through trade, they can challenge traditional ideas of national identity, change social norms, and influence political power relations. Although it is still debated how much importance a nation's cultural trade holds in international power dynamics, it cannot be denied that cultural influence is seen as a key aspect of state power.

Powers of the State

Power in international relations generally refers to the ability to persuade or dissuade an actor from doing something it would not otherwise do (Goldstein and Pevehouse, 2012). Put simply, a state's power depends on its capacity or potential capacity to influence others. Power can be categorised into hard power, soft power, and even smart power. The term "soft power" was introduced by Joseph S. Nye in 1990 as an analytical concept to explain elements of power beyond military and economic resources (Nye, 2021). According to Nye, soft power is "the ability to obtain preferred outcomes by attraction and persuasion rather than coercion and payment" (Nye, 2014, 2017; Foreign Policy Association, 2016). While hard power refers to more visible or tangible forms of strength that can threaten or coerce others, such as economic and military might (Kroenig, McAdam, and Weber, 2010; Goldstein and Pevehouse, 2012).

Since its emergence, the concept of soft power has become a fundamental part of the study of international relations. As Nye (2017) himself states in a commentary, "I thought of soft power as an analytic concept to fill a deficiency in the way analysts thought about power,

but it gradually took on political resonance" (p.2). However, its meaning, attributes, and the significance attributed to its relative power have varied and are sometimes regarded merely as rhetoric in politics.

The factors of cultural influence, national image, and recognition by others were also conceptualised by other scholars as soft power (e.g., Jin, 2024; Neto, de Sousa-Filho, and Lima, 2021; Schreiber, H., 2017; Smith, 2012; Goldsmith and Horiuchi, 2012; Zamorano, 2016). Therefore, some scholars argue that soft power resources and capabilities can offer opportunities for states to influence their regional neighbours in a way that differs from hard power. For example, researchers such as Ogunnubi and Isike (2015) believe that soft power can serve as a tool for regional influence, which formed the basis of their comparative analysis of how Nigeria and South Africa can use their soft power capabilities to shape their regional hegemonic status in Africa. They describe soft power as a state's ability to employ subtle and non-violent means of advancing its national interests on the international stage.

Having the ability to influence neighbouring regions is crucial for a state. In John Agnew's (1999) article on "Mapping political power beyond state boundaries," he challenges us to view power from different perspectives, such as the social-geographical conditions that enable power politics. Agnew argues that a state's political power also depends on how other states and institutions recognise it, with support, loyalty, and legitimisation all contributing to the formation of political identity. He further contends that technological advancements have altered how state power can be measured, where being territorially larger does not automatically make a state more economically or politically powerful.

Enhancing neighbourly relations through soft power via cultural exchange can be illustrated by an article by Hahm and Song (2021), which examined how cultural trade helped improve the relationship between South Korea and Taiwan. The authors observed that the popularity of Korean cultural products, largely driven by its entertainment industry, positively influenced relations between the countries, with more Taiwanese students studying in South Korea and increased tourism. It was also noted that the success of South Korean TV dramas and music videos, known as the "Korean Wave," significantly boosted economic trade between the nations, providing a strong argument for the effectiveness of soft power (ibid.).

Nevertheless, similar to the issue of cultural trade, defining and conceptualising soft power has also been debated among scholars and statesmen since the idea was first introduced. Many studies have described soft power as related to a country's cultural values or its ideological and cultural influence (Neto *et al*, 2021; Singh, 2010; Ogunnubi and Isike, 2015). In this context, a country's cultural products and the identity linked to the culture can be seen as sources of power (Schreiber, 2017; Singh, 2010). Similarly, soft power has often been equated with a nation's image or how its people, culture, and identity are perceived by others (Blanchard and Lu, 2012; Didier, 2019; Hill and Beadle, 2014; Neto, *et al,* 2021; Nye, 2014; Ogunnubi and Isike, 2015). Despite the different elements associated with soft power, there is a consensus that a significant part of soft power is rooted in shared ideas and identity. However, this raises the question of how cultural values are developed and what roles traditions and communication play in shaping our shared identity.

Revisiting Power in the Digital Age

In essence, the state has a full range of power capabilities and resources, both in hard and soft forms, that can be effectively used to influence outcomes favourable to national interests. As demonstrated by examples of how the "Korean Wave" spread across the globe,

from the works of Hahm and Song (2021) and Jin (2024), these examples illustrate how cultural influences, essentially soft power, can be managed effectively through digital platforms. Therefore, we argue in this paper that a state's ability to influence through soft power in the digital age can be regarded as "smart power".

Over the years, the concept of "smart power" has garnered increasing interest and prominence in foreign policy discussions. In an article by Wilson III (2008), he stated that a state's "capacity for creativity and innovation can trump its possession of armored divisions or aircraft carriers, and new hi-tech tools can greatly enhance the reach of military and non-military influence" (p.112). This emphasises the significant role that digital technology and advancements in telecommunications can play in shaping a state's relative power. Similarly, Popova et al. (2022) also examined the role of digital media and social networks as tools for implementing soft power. They argued that digital communication technologies have a strong influence on the formation of ideas among their users, which can generate both advantages and disadvantages for a nation. On the one hand, a nation can increase its influence and power, but on the other, it can create social and political threats through the dissemination of damaging information to the state.

The ability of states to use all available tools, combining hard and soft power to achieve preferred outcomes, has been termed "smart power" (Nye, 2017, 2021; Wilson III, 2008). Candidly, Wilson III (2008) writes, "sophisticated nations have everything from smart bombs to smart phones to smart blogs" (p.113). Just as bombs, the spread of information, especially misinformation, can significantly impact state power. This raises the question of how the digitalisation of cultural trade, that is, the use of technology to wield soft power, can be manipulated to attain desired results. For the state, this is not merely a question of soft power, but more fundamentally one of "smart power".

Blurred Lines: Managing Culture & Trade in the Digital Era

Based on our discussion so far, it can be argued that smart power is a tool for the state to utilise digital media to promote its cultural identity positively and to exert influence. Studies have demonstrated that traditional communication and digital media technologies can serve as powerful tools for transmitting information, whether supportive or damaging to a nation's image (see Jin, 2024; Nye, 2021; Hahm & Song, 2021; Surowiec, 2017; Zamorano, 2016; Hunter, 2009; Goldsmith and Horiuchi, 2012). Additionally, research indicates that foreign policies that support education initiatives and foster networks also significantly contribute to enhancing a nation's soft power ambitions to bolster its reputation (see Arif, 2017; Blanchard and Lu, 2012; Geun, 2009).

For instance, the idea of diplomacy through culture was highlighted by Yecies, et al (2019) in their article discussing how culture and power complement each other, where the concept of "cultural soft power" entered China's policy vocabulary in 2007 through President Hu Jintao's efforts to expand China's political and economic influence abroad. "In China, power is strongly associated with ideology, which is underpinned by disseminating 'correct' representations of the nation and national life, or at least representations that senior leaders and officials approve" (ibid., p. 206). Here, we are once again shown the importance of ideas and shared identities.

In today's seemingly borderless world, our environment is no longer limited to physical walls or communities within our reach. Instead, rapid technological advancements in telecommunications have transformed the world into a vast source of knowledge. This

highlights the importance of re-examining the role and significance of smart power in the digital age. As Schrader (2015) states, "new media, and social media in particular, provide affordances for learning, knowledge development, meaning making, and mind changing" (p.27). The close connection between ideas and technology is further illustrated in an article by Kroenig, McAdam, and Weber (2010), where the authors argued that a state's soft power's effectiveness heavily depends on its ability to communicate the intended message and ideas that can influence the attitudes of its audiences.

This can be linked to the idea of social constructs. From a constructivist perspective, soft power emphasises how actors develop their ideas and beliefs through social interaction. Social constructivism suggests that knowledge development, such as learning new ideas and norms, involves active engagement with objects and people in one's environment (Schrader, 2015). Once again, this highlights the role that smart power plays, particularly the influence of digital technology (especially in media), and how it can be utilised to spread ideas that shape people's views and attitudes towards a state.

As foreign media, music, fashion, and entertainment become more prevalent through global trade and digital sharing platforms, domestic cultures also risk being overshadowed by dominant international cultures. For example, foreign countries with large media conglomerates may use cultural trade to promote certain political ideologies or consumer behaviours that might not align with the values of the importing country. If traditional values and customs become less popular compared to foreign culture, the political autonomy of the state is at risk. According to soft power reasoning, when local cultures are marginalised in favour of globalised norms, it can reduce a country's ability to assert its cultural sovereignty and preserve a distinctive national character.

Nevertheless, influencing others through soft power based on our views may not be as straightforward as simply sharing messages or exchanging cultural products. According to Clarke (2016), publications in Cultural Studies have focused more on the implied meanings that actual audiences interpret from cultural products (such as artwork, film, music, etc.), both individually and collectively. Although cultural products have their own values and associated meanings, it is not guaranteed that these intended meanings will be received or understood in the same way by the audience. On the other hand, it may even have the opposite effect, being perceived as propaganda and outright rejected by the intended audience.

Based on Clarke's research (2016), he concluded that

> *[...]much international cultural exchange is facilitated by a global cultural market over which states have relatively little control. Global media are, if anything, more likely to be influenced by corporations, although even they equally do not ultimately control the modes of reception and re-interpretation to which cultural products are subject.* (p. 170)

Global media today holds greater significance than it did a decade ago. Social media has established a very strong presence as we enter the 21st century, although its influence varies across generations and plays a key role in shaping our culture. The way we interact, who we engage with, and the types of knowledge shared through social media are changing rapidly.

According to the Digital 2023 Global Report (DataReportal.com), there were 5.16 billion internet users worldwide in 2022, meaning that 64.4 percent of the global population is now online. An article in Forbes Advisor (Forbes.com) estimates that 4.9 billion people globally

used social media in 2023. Following this, the Digital 2024 Global Report (DataReportal.com) revealed that the top five most-used social platforms are Facebook, YouTube, WhatsApp, Instagram, TikTok, and WeChat. Regarding the average number of times each user opens social media per month, the countries with the highest figures for the first four platforms are Egypt, South Korea, Argentina, Turkey, and Israel.

Social media is not just for fashion influencers or dance challenges; it is a powerful tool for spreading ideas and gaining support for both state and non-state agendas. According to a report by DigiTips.ch on world leaders on social media in 2022, as of May 2022, the Prime Minister of India, Narendra Modi, has 126 million followers on his personal and institutional accounts, which is twice as many as the American President, Joe Biden. Among world leaders, he has the most followers on Twitter (over 126 million) and on Facebook (over 60 million).

Renowned political scientist Ian Bremmer introduced the idea of the "digital order" potentially shaping the future of our world's geopolitics. In his Ted Talk segment (14 June 2023), Bremmer stated:

> *"The dominant actors setting rules and exerting power aren't governments but technology companies. […] Tech companies decide whether former U.S. President Donald Trump can speak without filters and in real time to hundreds of millions of people as he runs for president again. Without social media and its ability to promote conspiracy theories, there is no Jan. 6 insurrection on Capitol Hill, no trucker riots in Ottawa, no Jan. 8 revolt in Brazil. Tech companies even define our identities." (2023)*

The Undiscovered Future

In the 21st century, the digital age has transformed communication, commerce, and entertainment. Our discussion clearly highlights that cultural trade can impact a nation's cultural identity as well as shape public opinion and the course of international relations. The ability to subtly influence the values, attitudes, and behaviours of people to align with national (or foreign) interests through cultural trade via media exports of various forms is redefining soft power.

The state's control over messages shared on social media varies by country, but it generally aims to regulate content for reasons that are often politically motivated. Among these reasons, protecting national security, maintaining public order, and preserving social harmony are the most common justifications given by government authorities. In some countries, this control is exercised through strict censorship, while in others, more subtle methods such as content moderation and legal frameworks are employed. The trust that audiences place in the state, corporations, or social media content is influenced by various factors, including the perceived credibility of the source, past actions, and political ideologies. But where does the power of the state lie in terms of control and response? With advances in technology, algorithms also play a crucial role by curating content that aligns with a person's interests and personal views, creating "filter bubbles" that reinforce existing beliefs (Pariser, 2011).

If we rethink the idea of power as the ability to persuade or dissuade others, the current digital landscape allows communication at faster speeds and wider reach, which can pose challenges for the state. The capacity to influence through soft power is now available to both state and non-state actors, nearly on equal terms. Governments must compete with the diverse range of content provided by social media, which is personalised by algorithms to maximise

engagement and user satisfaction. While governments can regulate content to some degree, algorithms often offer a more immediate, tailored experience that can surpass government narratives (Tufekci, 2015).

A question that warrants further analysis in the rise of smart power is how a nation's cultural identity could be affected and what role cultural trade plays in relation to state power. Among the questions for future research is how much control a state would have over messages broadcast and shared on social media by the population. Herein lies the conundrum. What we perceive as a significant issue in wielding smart power in the digital age is trust. With the rapid and dynamic nature of technological progress, it raises serious concerns about algorithmic power and how it is used to shape cultural identity. It is difficult to determine which entities – the government, corporations, or the increasingly evolving artificial intelligence – control the mechanisms behind the algorithms of social media.

In our discussion, we proposed that if states can harness digital technology to promote cultural diplomacy through trade, then the concept of 'smart power' can be expanded to include how social media is used by both state and non-state actors to build shared values. However, the challenge lies in balancing control while encouraging greater cultural trade to achieve global recognition and support.

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Parents' Experiences with Communication and Perception of Childcare Quality in Malaysia: A Mixed-method Study

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ABSTRACT

Effective communication between parents and childcare providers is crucial for delivering high-quality childcare. This study explores the impact of communication satisfaction on parents' perceptions of childcare quality in Malaysia. Using a mixed-methods approach, the study collected 45 survey responses and conducted interviews with four parents whose children attend childcare. Quantitative data were analysed descriptively, while qualitative data were examined through thematic analysis based on Braun and Clarke's (2006) six-step framework. In-person interactions and WhatsApp emerged as the most common communication channels, with parents mainly discussing health updates, daily activities, and developmental progress. Most parents were satisfied with the communication; however, some requested more frequent and detailed updates, while others expressed dissatisfaction due to limited developmental information and occasional insensitive language from providers. The findings also reveal that communication methods, frequency, and provider responsiveness significantly influence parents' satisfaction and overall perception of childcare quality. Additionally, the study highlights the role of cultural factors in shaping communication and childcare practices within Malaysia's diverse society. The results suggest that improving providers' communication skills, enhancing digital engagement, and fostering cultural sensitivity can strengthen relationships between parents and childcare providers, thereby enriching the overall childcare experience. Future research should consider providers' perspectives and employ larger samples and longitudinal designs to monitor changes in communication practices over time.

Keywords: *parental satisfaction, childcare quality, parent-caregiver communication*

INTRODUCTION

The quality of childcare is a multidimensional concept that includes both structural and process-related elements, affecting children's overall development (Salehuddin and Winskel, 2016) and parental satisfaction (Hidayat et al., 2022). Structural quality refers to measurable features such as staff-child ratios, qualifications of childcare providers, physical environment, and health and safety regulations (Harrist et al., 2007), while process quality highlights the nature of interactions between children, childcare providers, and parents (Harrist et al., 2007; Coelho et al., 2019). High-quality childcare supports cognitive, social-emotional, and language development, establishing a foundation for long-term educational and personal achievement (Hidayat et al., 2022).

While the importance of parent-childcare provider communication in early childhood education is widely recognised, there is limited research examining this issue within the Malaysian childcare context. This results in a gap in understanding the communication

practices, challenges, and expectations faced by parents and childcare providers locally. Building on this understanding, an important aspect of childcare quality is parent-childcare provider communication (Almendingen et al., 2022), which ensures that parents are informed about their child's progress, daily experiences, and any concerns that may arise. Research has shown that effective communication is linked to parents' trust in childcare services, their sense of partnership with providers, and overall satisfaction with childcare quality (Mena et al., 2020). Conversely, communication gaps can lead to dissatisfaction, misunderstandings, and decreased parental engagement in early childhood programmes (Hanafi and Taslikhan, 2016). Additionally, barriers such as time constraints, lack of training among childcare providers, and cultural sensitivities can impede this communication (Mena et al., 2020).

Furthermore, effective communication between parents and childcare providers is widely recognised as the foundation of quality childcare. This relationship influences not only parental satisfaction but also the development and well-being of children. Studies in various contexts highlight the vital role of such partnerships in early childhood education, where mutual trust and open communication foster a sense of security for children and allow for tailored caregiving approaches (Coelho et al., 2019; Almendingen et al., 2022).

To clarify this further, Bronfenbrenner's Ecological Systems Theory (1977) offers a framework for understanding how various environmental systems interact with childcare practices, with communication acting as a key mechanism connecting these systems and supporting children's development. The microsystem refers to the direct interactions children have with their environment, such as relationships with parents and childcare providers. These interactions are crucial for a child's development, as the quality of these relationships, being nurturing or responsive, shapes overall growth. The exosystem includes settings in which the child is not directly involved but that still influence their development by affecting those closest to them, such as local government policies, extended families, media, and workplace conditions. These factors determine how much time, energy, and attention parents and childcare providers can devote to engaging with and nurturing children. For example, parents' working hours influence the amount of time they can spend on childcare, while national childcare policies establish the standards for childcare quality.

The macrosystem encompasses broader influences, including cultural values, social norms, and political ideologies. In Malaysia, for example, cultural beliefs may impact how parents perceive discipline, learning styles, or the role of religious education in childcare. The chronosystem captures changes over time, such as evolving parenting expectations, childcare policies, and technological advancements in communication tools. The rise of digital platforms, such as WhatsApp, has transformed how parents and childcare providers share information, thereby affecting communication dynamics. Most pertinent to this study is the mesosystem, which refers to the interactions between different environments, such as those between parents and childcare providers or parents and their child's peers. Effective communication within this system ensures consistency across various settings, enhancing the child's development. In this context, parents and childcare providers play vital roles in shaping children's experiences and developmental outcomes. Strong communication between them strengthens these connections.

Globally, structured communication models have been shown to enhance childcare quality. The Head Start programme, established in the United States of America, is a federally funded initiative designed to promote school readiness among children from low-income families by providing comprehensive early childhood education, health, nutrition and parental involvement services. A key feature of Head Start is its emphasis on strong communication between parents and childcare providers (Cook et al., 2023), which has been shown to enhance

parental engagement and improve children's early learning experiences (Mena et al., 2020). Research on Head Start communication models reveals that structured, consistent and culturally responsive communication leads to higher parental involvement (Bryant-Mathurin, 2023), better developmental outcomes for children (McCoy et al., 2016), and improved childcare satisfaction (Coelho et al., 2019).

In Malaysia, where childcare services are expanding to meet the needs of working parents, the dynamics of communication between parents and childcare providers remain underexplored (Aziz et al., 2021). Malaysia is a highly diverse and multicultural society, home to ethnic groups such as Malay, Chinese, and Indian, as well as various indigenous communities. This diversity influences childcare expectations, parenting styles, and communication norms between parents and childcare providers (Salehuddin and Winskel, 2016). Cultural beliefs and traditions significantly influence how parents perceive childcare quality and the role of communication in their child's development (Nizam et al., 2024). Studies suggest that parental expectations of childhood development differ among various ethnic groups in Malaysia, especially regarding discipline, independence, and social behaviours (Salehuddin and Winskel, 2016). These cultural differences can impact how parents interact with childcare providers, their communication preferences, and their satisfaction with provider interactions.

Although emphasis has been placed on integrated childcare approaches, including active parental involvement (Hanafi and Taslikhan, 2016), challenges remain, such as cultural differences in communication expectations (Rahmatullah et al., 2021), the availability of high-quality services (Sulaiman and Hussain, 2023), and the diverse needs of working parents (Aziz et al., 2021). Existing research highlights the significance of communication patterns in influencing parents' perceptions of childcare quality. For example, effective dialogue about daily routines (Abashah and Taib, 2024) and developmental milestones (Salehuddin and Winskel, 2016) enhances trust and satisfaction between parents and childcare providers. In a study involving various early childhood settings, communication occurs through different channels, including face-to-face interactions, phone calls, mobile applications, written reports, books, and social media platforms (Hanafi and Taslikhan, 2016). However, it remains unclear which mediums parents prefer, how often communication takes place, and whether these interactions meet parental expectations, especially within the context of childcare in Malaysia.

Considering the increasing reliance of families in Malaysia on childcare services (Aziz et al., 2021), understanding how communication shapes parents' experiences of childcare quality is crucial for policy development and service enhancement. This study examines parents' experiences with various communication methods, communication patterns, and cultural influences with childcare providers, analysing how these interactions impact their overall satisfaction with childcare services in Malaysia. Employing a mixed-method approach, the research explores the mediums and patterns of communication within childcare settings, as well as the role of cultural factors in shaping communication and childcare practices. The findings aim to inform strategies for strengthening parent–provider partnerships, ultimately improving the quality of childcare across Malaysia.

Research Objectives

1. To identify the methods and patterns of communication in childcare environments.
2. To explore parents' satisfaction with communication between childcare providers and parents in Malaysia.

3. To investigate how parents' satisfaction with communication influences their perceptions of childcare quality.
4. To examine the influence of cultural factors on communication and other childcare practices

Research Questions

1. What are the medium and pattern of communication in childcare settings?
2. Are parents content with the communication they have with childcare providers in Malaysia?
3. How does parents' satisfaction with communication affect their perceptions of childcare quality?
4. What is the influence of cultural factors on communication and other childcare practices?

METHOD

This study uses a mixed-methods design, combining both quantitative and qualitative approaches to achieve a comprehensive understanding of the research objectives. The quantitative component involves structured surveys that collect measurable data on parents' satisfaction with communication and their experiences of childcare quality. The qualitative component, however, utilises semi-structured interviews to explore communication practices in greater depth and examine the influence of cultural factors. These interviews aim to uncover nuanced perspectives on communication practices, satisfaction levels, and the effects of cultural factors on these interactions.

The study employs purposive sampling to ensure that participants meet specific inclusion criteria relevant to the research objectives. Eligible participants are parents with at least one child enrolled in childcare for a minimum of six months, with the child under the age of five attending programmes that provide more than five hours of daily living assistance. Furthermore, childcare should not be registered as kindergartens, regardless of whether it operates as home-based care or childcare centres. This distinction was made because the study focuses on childcare as a whole, rather than solely on childhood education.

Data collection for the study is conducted in two methods. The selection criteria are identical for both quantitative and qualitative data. Quantitative data is gathered through surveys with closed-ended questions, adapted from previous research on childcare communication and quality (Mena et al., 2020; Coelho et al., 2019). The survey in this study comprises three main sections: (1) screening questions, (2) background information, and (3) key questions addressing the research aims. The screening section confirms respondents meet all selection criteria. Background information includes details about parents and children, such as age, education level, and type of childcare (home-based or centre-based). The third section contains 21 items evaluating parents' satisfaction with communication, communication patterns and channels, and their perceptions of overall childcare quality. Examples of items include: "How does your childcare provider communicate with you about your child?", "What does your childcare provider communicate about your child?", "How satisfied are you with the current communication methods in meeting your needs as a parent?", "How often do you communicate with your childcare provider about your child?" and "Are you satisfied with how childcare providers address your concerns or questions?" Different scale formats were utilised,

depending on the item, such as multiple-choice questions (parents' preferred communication method), frequency scales (indicating how often the childcare provider communicates with parents), and 4-point Likert scales for measuring satisfaction and agreement levels. Respondents were also asked to select up to three aspects they considered most important when assessing childcare quality, including safety and cleanliness, learning and developmental activities, provider qualifications and training, child-provider ratio, parent-provider communication, sports and outdoor activities, parent participation (like parent-provider meetings or take-home activities), religious activities, and physical facilities (such as sensory rooms, play equipment, or outdoor play areas). The research team reviewed the items for content relevance, clarity, and suitability within the Malaysian childcare context.

Qualitative data was collected through semi-structured interviews with four participants. Interview questions were informed by Bronfenbrenner's Ecological Systems Theory (1977) and previous studies on parental communication and cultural dynamics in childcare. Questions aimed to explore communication channels, satisfaction levels, perceptions of childcare quality, and cultural influences. Each interview was audio-recorded, transcribed, and translated if necessary. Four interviewers participated in this study. To ensure consistency among the interviewers, a semi-structured interview guide (a standardised list of questions and prompts) was prepared in English and Malay before data collection. Examples of interview questions include, "Can you describe how your childcare provider usually communicates with you?", "What types of information do you normally receive from the provider?", "Are there times when you felt the communication was lacking or unclear?", "In what ways, if any, does your cultural background influence how you communicate with the childcare provider?". Qualitative data was analysed using thematic analysis, enabling the identification of recurring themes related to communication practices, satisfaction, and cultural influences. The thematic analysis followed Braun and Clarke's (2006) six-step approach: familiarisation with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. Coding was conducted independently by four researchers to ensure inter-coder reliability, and discrepancies were discussed until consensus was reached. Software was not utilised; instead, manual coding was employed due to the small sample size.

The study was conducted with ethical considerations to ensure participants' rights and confidentiality were safeguarded throughout. Informed consent was obtained before the interviews and was provided along with the survey. Personal information was removed from the interview transcripts and replaced with codes (P1, P2, P3, P4). Both English and Malay were used in the survey and interviews to reflect Malaysia's multilingual context. The surveys were distributed in both languages, and participants could choose the language they were most comfortable with during the interviews.

The findings from both qualitative and quantitative data were integrated using the convergent mixed methods approach, specifically the simultaneous bidirectional framework, where both datasets equally guided the final interpretation without any method taking precedence over the other (Moseholm and Fetters, 2017). By comparing the trends from the survey with the in-depth insights from interviews, the study employed this method based on Andrew and her colleagues (2010), allowing it to explore the limitations of quantitative methodology, such as its inability to fully capture parents' satisfaction.

Table 1 outlines the demographic characteristics of the survey respondents. After screening, 45 respondents were included in this study. The respondents were mainly mothers (80%), and participants' ages ranged from 27 to 43 (mean = 33.6 years). In terms of educational attainment, both fathers and mothers predominantly held undergraduate degrees, as shown in

Table 1. Apart from 7 parents, all other parents had educational levels beyond secondary school.

Table 1: Demographic Information

Items	Response Options	Number of Respondents (N)	Percentage (%)
Ethnicity	Malay	35	77.8
	Chinese	4	8.8
	Indian	3	6.7
	Others	3	6.7
Highest education level of father	Secondary school	7	15.6
	Diploma or equivalent	9	20.0
	Undergraduate degree or equivalent	20	44.4
	Postgraduate	7	15.6
	Professional certificate/s	2	4.4
Highest education level of mother	Secondary school	0	-
	Diploma or equivalent	9	20.0
	Undergraduate degree or equivalent	25	55.6
	Postgraduate	11	24.4
	Professional certificate/s	0	-

Regarding childcare options, most children were enrolled in centre-based care (44.4% non-franchise, 31.2% franchise), with 24.4% receiving home-based care, as shown in Table 2. A small percentage (6.7%) of families reported having a child with special needs.

Table 2: Childcare Details

Items	Response Options	Number of Respondents (N)	Percentage (%)
Types of childcare	Home-based	11	24.4
	At the centre (non-franchise)	20	44.4
	At the centre (franchise)	14	31.2
Is your child/ any of your children a special needs child?	Yes	42	93.3
	No	3	6.7

Meanwhile, four parents were interviewed for this study, all of whom were female and held a bachelor's degree. The participants' ages ranged from 27 to 36 years old, and they represented the three major ethnic groups: Malay, Chinese, and Indian, with diverse professions. The participants had one or two children, whose ages ranged from 1 year and 2 months to 4 years. Childcare arrangements varied, with three participants using centre-based care and one opting for home-based care.

FINDINGS

This section is divided into two parts, beginning with the survey findings and then the interview results. The results are organised to correspond with the study's research objectives.

Survey

It is presented in the following order, beginning with the parents' perceptions and experiences of provider communication, their satisfaction with the communication, and their overall satisfaction with childcare quality. From the survey question, the medium of communication and the frequency of its use are shown in Table 3. Communication methods varied widely, with in-person interactions being the most frequent (68.8% daily). Online communication was also common, used daily by 40% of respondents. Other methods such as phone calls, memos, and custom-built apps saw less frequent use, with notable percentages of respondents indicating they were not used at all.

Table 3: Types and Frequency of Communication

Items	Response Options	Number of Respondents (N)	Percentage (%)
Phone call frequency	Daily	9	20.0
	Weekly	6	13.3
	Monthly	1	2.3
	Once in several months	10	22.2
	Not used	19	42.2
In-person communication frequency	Daily	31	68.8
	Weekly	3	6.7
	Monthly	0	-
	Once in several months	8	17.8
	Not used	3	6.7
Book usage frequency	Daily	9	20.0
	Weekly	2	4.4
	Monthly	2	4.4
	Once in several months	2	4.4
	Not used	30	66.8
	Daily	4	8.9

Memos frequency	Weekly	6	13.3
	Monthly	3	6.7
	Once in several months	9	20.0
	Not used	23	51.1
Online communication frequency	Daily	18	40.0
	Weekly	13	28.9
	Monthly	2	4.4
	Once in several months	7	15.6
	Not used	5	11.1
Email frequency	Daily	0	-
	Weekly	1	2.2
	Monthly	2	4.4
	Once in several months	3	6.7
	Not used	39	86.7
Custom-built apps by centre frequency	Daily	11	24.4
	Weekly	4	8.9
	Monthly	1	2.2
	Once in several months	0	-
	Not used	29	64.5

Source: Author's survey data

Meanwhile, Table 4 below details the content and clarity of communication with the provider. The most discussed topics included health symptoms (95.6%), daily activities (75.6%), and videos and/or pictures (75.6%). While most parents found the communication clear and easy to understand (71.1%), nearly a third occasionally required clarification.

Table 4: Communication Content and Clarity

Items	Response Options	Number of Respondents (N)	Percentage (%)
	Health symptoms	43	95.6

Communication content	Physical injuries	32	71.1
	Anecdotes	4	8.9
	Behaviour	31	68.9
	Daily activities	34	75.6
	Videos and/or pictures	34	75.6
	Parenting information	17	37.8
	Announcement	33	73.3
	Others	0	-
Message clarity	Always clear and easy to understand	32	71.1
	Most of the time, it's clear, but sometimes I need to ask for clarification	13	28.9
	I often feel confused about the messages I receive	0	-

Note. Participants could choose more than one answer
Source: Author's survey data

Table 5 below summarises the communication preferences of parents and how often they initiate contact with childcare providers. The most popular method of communication was verbal (51.1%), followed by digital communication (46.7%). The majority of parents addressed their concerns in person or online, with both methods being equally common (82.2%). Regarding how often they communicate, more than half of the parents (55.6%) initiated contact daily.

Table 5: Parents' Communication Preference and Frequency of Initiation

Items	Response Options	Number of Respondents (N)	Percentage (%)
Preferred communication type	Verbal communication	23	51.1
	Digital communication	21	46.7
	Written reports	1	2.2
How concerns are communicated	In-person	37	82.2
	Online	37	82.2
	Email	1	2.2
	Custom-built apps by centre	4	8.9
	Others	0	-

Frequency of initiating communication	Daily	25	55.6
	Weekly	11	24.4
	Monthly	2	4.4
	Once in several months	7	15.6

Source: Author's survey data

Key aspects of childcare quality valued by parents included safety and cleanliness (97.8%), learning and developmental activities (68.9%), and provider qualifications (48.9%), as shown in Table 6. However, no parent considered parent participation an important aspect of childcare quality.

Table 6: Childcare Quality

Items	Response Options	Number of Respondents (N)	Percentage (%)
Three most important childcare quality aspects	Safety and cleanliness	44	97.8
	Learning and developmental activities	31	68.9
	Provider qualifications and training	22	48.9
	Child-provider ratio	18	40.0
	Communication with parents	9	20.0
	Sports and outdoor activities	2	4.4
	Parent participation	0	-
	Religious activities and learning	4	8.9
	Physical facilities	5	11.1

Source: Author's survey data

Table 7 shows findings on parental satisfaction with childcare quality and communication. Most parents were pleased with the current approach (93.3%) and the frequency of communication (91.1%), as well as overall childcare quality (93.3%). Similarly, most parents (93.3%) were satisfied with how their childcare provider addresses concerns. Notably, aside from one parent, all agreed that effective communication from their childcare provider enhances the quality of care.

Table 7: Childcare Quality and Communication Satisfaction

Items	Response Options	Number of Respondents (N)	Percentage (%)

Satisfaction with the current communication methods	Very satisfied	13	28.9
	Satisfied	29	64.4
	Dissatisfied	3	6.7
	Very dissatisfied	0	-
Satisfaction with frequency of communication	Very satisfied	12	26.7
	Satisfied	29	64.4
	Dissatisfied	4	8.9
	Very dissatisfied	0	-
Satisfaction with how childcare provider addresses concerns or questions	Very satisfied	14	31.1
	Satisfied	28	62.2
	Dissatisfied	3	6.7
	Very dissatisfied	0	-
Satisfaction with overall quality of childcare	Very satisfied	17	37.7
	Satisfied	25	55.6
	Dissatisfied	3	6.7
	Very dissatisfied	0	-
Do you agree that effective communication from your childcare provider improves the quality of care?	Strongly agree	28	62.2
	Agree	16	35.6
	Disagree	1	2.2
	Strongly disagree	0	-

Source: Author's survey data

The results of the Pearson correlation analysis between communication satisfaction and overall quality of childcare are shown in Table 8. The results indicated that there was a significant, strong, positive correlation between satisfaction with the current communication methods and satisfaction with overall quality of childcare, $r(45) = .61$, $p < .001$. Similarly, satisfaction with how the childcare provider addresses concerns or questions also had a significant, strong, positive correlation with overall quality of childcare, $r(45) = .71$, $p < .001$. Meanwhile, satisfaction with the frequency of communication had a significant, moderate, positive correlation with overall quality of childcare, $r(45) = .50$, $p < .001$.

Table 8: Correlations with overall quality of childcare

Items	r
Satisfaction with the current communication methods	.605**
Satisfaction with frequency of communication	.497**
Satisfaction with how childcare provider addresses concerns or questions	.701**

Note. N =45. **. Correlation is significant at the 0.01 level (2-tailed), $p < .001$.

Summary of Survey Findings

Overall, the results demonstrate how vital communication is in shaping parents' satisfaction with the quality of childcare. The most common communication methods were face-to-face and online, with parents mainly discussing daily activities, health issues, and sharing photos or videos. Some parents occasionally required clarification, but most reported that communication was clear. Parents preferred verbal and digital communication, using in-person and online platforms as their primary means of raising concerns. The majority of parents initiated communication daily, valuing safety, cleanliness, learning and developmental opportunities, as well as provider qualifications and training as key aspects of childcare quality. Most were satisfied with the current methods and frequency of communication, along with overall childcare quality. The strong correlations identified suggest that communication methods, frequency, and provider responsiveness significantly influence parents' overall perception of childcare quality.

Interview

To supplement the survey results, qualitative data was collected through interviews to gain a deeper understanding of parents' viewpoints and experiences regarding communication with childcare providers. Thematic analysis was performed to identify key themes and recurring patterns. The interview findings are presented based on each research question, addressing the mediums and patterns of communication, parents' satisfaction with communication in childcare settings, the impact of communication satisfaction on perceptions of childcare quality, and the influence of cultural factors in communication practices. An additional aspect not covered in the survey, which may be significant in the multicultural Malaysian context, was included—namely, exploring cultural influences on communication practices.

1. ***Mediums and Patterns of Communication***

The findings revealed various mediums and patterns of communication between parents and childcare providers. Three themes emerged from the analysis.

Theme 1: WhatsApp Communication.

The most commonly used medium for communication was Whatsapp. It was mainly used for general updates such as daily activities, meals, the child's progress, and announcements. Both P1 and P3 shared that they received updates on their child's activities through WhatsApp either daily or weekly. One parent also noted that "*They also post*

announcements in the group. WhatsApp is the most frequent method, and I find it very convenient." (P1).

Theme 2: Face-to-Face Communication

Allparents reported face-to-face communication, especially during drop-off and pick-up times. The shared information included developmental and behavioural updates, as well as health, safety, and parental concerns. For example, one parent stated, "*In the evening, when we pick up our son, usually if there are any issues regarding safety, for example, fall or injury, the childcare provider will inform us including informing the necessities that needed*." (P3). Another example is when P2 reported that drop-off and pick-up times were used to discuss developmental milestones achieved or any immediate health concerns.

Theme 3: Written Records and Digital Applications

These methods of communication were less utilised by childcare providers. Only one parent reported that their childcare provider kept a record book, but it was kept by the provider and only shared with parents when necessary (P3). Similarly, only one parent mentioned the use of digital applications for announcements and submitting health verification forms, saying, "*We do have to download an app... for us to send the verification forms and also for the school to make any major announcements*" (P4).

2. Parents' Satisfaction with Communication in Childcare Settings

The findings revealed that parents had mixed levels of satisfaction with communication in childcare settings. Two themes that emerged from the analysis are satisfied with communication and unsatisfied with communication, each with several subthemes focusing on specific areas of satisfaction or concern.

Theme 1: Satisfactory Elements regarding Communication

Parent Involvement. Parents appreciate being involved in their child's care, especially when providers seek their input on managing specific situations with their children. For example, one parent shared, "*My son was having some trouble sharing toys with his friends. The teacher asked me how we handle this at home and tried to apply the same approach in class. I appreciated that they involved me.*" (P1)

Timely Updates. Many parents appreciated receiving timely updates either through face-to-face communication or digital platforms such as WhatsApp. One parent mentioned that the childcare provider responds promptly to messages and informs her of any new skills her child acquires each day (P2).

Approachability of Staff. Parents also valued the approachability of the childcare staff in raising any questions or concerns, promoting trustworthiness. One parent stated, "*I like that they're approachable. Even if I have a small concern, I feel comfortable bringing it up*." (P1)

Constructive Feedback. The parents also valued constructive feedback from childcare providers, which included practical advice or suggestions that promote their child's well-being. For example, one parent mentioned,

> "*They also give positive feedback about AR, which means a lot to me. ... One time, AR wasn't eating well during lunchtime. The teacher called me to discuss it and even*

shared some suggestions to make him more interested in food. I followed their advice, and it worked!" (P1).

Conflict Resolution. Another aspect of parental satisfaction was effective conflict resolution by childcare providers. As one parent expressed, "*I am very grateful that the principal was a mediator between these two parents when there was a conflict*." (P4).

Theme 2: Unsatisfactory Elements regarding Communication

Lack of Updates. Parents also complained about unreliable updates. One parent recounted an incident where they were not informed about a class activity, causing their child to feel left out due to lack of preparation (P1). Additionally, several parents expressed dissatisfaction with the frequency of updates about their children. They wanted to receive more regular updates, such as multimedia content like videos when their child does something (P2). One parent said,

> "*I still have not been able to talk to his class teacher. Up till now, there is a time a date when they have a parent-teacher meeting, which is in January. So, every half a year they will do it. Only then I get to talk to the teacher. As of now, I've not been even introduced to the teacher just yet, everyone, everything that I liaise with, is with the principal. So, I'm quite a bit in the dark about what exactly my son is doing in class, unless the teacher informs the principal, and then the principal, so happens forwards it to me, or tells me. Updates me about it. If I ask any questions, the principal has to go back to ask the teacher and then come back to me. So, there is a slight delay on that*" (P4).

Furthermore, the parent also sought more insights into their child's emotional development to better support their growth at home (P1).

Negative labelling. Parents also expressed concerns about childcare providers using insensitive language, such as labelling the child as a "fat kid" (P3).

3. Influence of Communication Satisfaction on Perceptions of Childcare Quality

The results show that parents' views of childcare quality are shaped by their satisfaction with communication. Three themes emerged from the analysis.

Theme 1: Positive Outlook on Health Vigilance

Parents' appreciation of health-related communication influences their view of childcare quality. One parent noted that the childcare was vigilant in checking the children's health and encouraged parents to fill out daily health verification forms, serving as a reminder for parents (P4).

Theme 2: Positive Outlook on Parental Involvement

The involvement of parents in decision-making about their children's health and safety also fostered a positive perception of the quality of childcare, particularly their respect for parental autonomy. One parent noted,

> "*Like, if I say there is a change from the government saying there's no need for face mask, they do a poll with the parents like to, do you want your children, your child to*

continue wearing face masks? Do you want to take weekly COVID testing?... So it gives us a lot of freedom as parents as well. Like to a certain extent, like it's a control decision, but they allow the parents also to partake in moving forward. What do we (the parents) want from here? You know? So I feel like, okay, to a certain extent, they do allow parents autonomy to choose for their children's well-being" (P4).

Theme 3: Positive Outlook on Child's Independence

Parents valued the childcare providers' efforts in offering insights into their child's developmental progress, especially regarding independence. It reassures parents that the childcare aims to optimise the child's development. One parent said,

"...they foster a lot of independence...I get a lot of reports...like, does your child know how to wear his own shoes? And I'm like, not yet...they also give a little bit of advice to increase the independence of the child…So that means, I know this childcare is also like, fostering a lot of independence" (P4).

4. Role of Cultural Factors in Communication and Other Childcare Practices

The analysis identified several ways in which cultural factors influenced communication practices. Two themes emerged from this. Only one parent did not place much emphasis on cultural factors in childcare.

Theme 1: Respect and Sensitivity towards Cultural and Religious Differences

The childcare providers were observed to be respectful and considerate towards families from diverse cultural and religious backgrounds. One parent mentioned,

"Yes, it's very diverse. There are Malay, Chinese and Indian families… I think we're part of the minority since most of the families are Malay or Chinese. But it hasn't been an issue. The teachers are sensitive and respectful towards all cultures" (P1).

Similarly, another parent appreciated the efforts made by the childcare staff to ensure that the meals served are halal, such as making announcements for potluck, demonstrating their respect for religious dietary restrictions (P4). Parents also showed respect towards elders in accordance with cultural norms, which influenced their communication. For example, one parent said, "*So, I don't really like it but I am reluctant to say it because she is elderly. So, for me it's okay like that. I feel like…just give in to her*" (P2).

Theme 2: Diversity and Inclusivity

Childcare providers often promote cultural diversity and inclusion through activities that showcase different cultures. For example, a parent who was a minority at the centre shared,

"*For Deepavali, they invited me to share about the festival, and they even taught the kids simple kolam design. They also celebrate other cultural events like Chinese New Year and Hari Raya, which makes all families feel welcome and involved*" (P1).

Additionally, other parents have also observed that the children participate in performances representing various cultures (P4). This was also reflected in their communication practices, whereby one parent mentioned, "*Some Chinese parents are not*

Mandarin-speaking, but they got an emcee that made sure that they spoke in English and Chinese. So we were very appreciative of the English part." (P4).

Summary of Interview Findings

Parental satisfaction with communication in childcare settings was varied. Major themes included satisfaction with timely updates, parental involvement, approachable staff, and dissatisfaction with inconsistent updates and insensitive language. Face-to-face interaction and WhatsApp were the main methods of communication. Communication about health vigilance, parental involvement, and child independence all positively affected parents' perceptions of childcare quality. Finally, providers respecting diverse backgrounds and engaging in activities that promote inclusivity demonstrate their cultural sensitivity and inclusiveness. A thematic summary table linking qualitative themes to research questions is shown in Table 9.

Table 9: Summary of Themes and Subthemes with Research Questions

Research Question	Theme	Subtheme	Illustrative Quote
RQ1: What is the medium and pattern of communication in childcare settings?	WhatsApp Communication	Daily updates, announcements	"WhatsApp is the most frequent method, and I find it very convenient." (P1)
	Face-to-Face Communication	Drop-off/pick-up, real-time concerns	"In the evening… the childcare provider will inform us including informing the necessities." (P3)
	Written Records and Digital Apps	Health forms, minimal use	"We do have to download an app… for us to send the verification forms." (P4)
RQ2: Are parents satisfied with the communication with childcare providers in Malaysia?	Satisfactory Communication	Timely updates, involvement, approachability, constructive feedback, conflict resolution	"They give positive feedback… it worked!" (P1)
	Unsatisfactory Communication	Infrequent updates, unclear reporting, insensitive language	"So I'm quite a bit in the dark about what exactly my son is doing in class." (P4)
RQ3: How does parents'	Health Vigilance	Consistent health checks	"They check the children's health… it

satisfaction with communication influence their experiences of childcare quality?			reminds parents too." (P4)
	Parental Involvement	Autonomy in decision-making	"They do allow parents autonomy to choose for their children's well-being." (P4)
	Child Independence	Reports and advice on self-help skills	"They foster a lot of independence… give advice to increase independence." (P4)
RQ4: What is the role of cultural factors in communication and other childcare practices?	Respect and Sensitivity	Religious accommodation, respect for elders	"They're sensitive and respectful towards all cultures." (P1); "She is elderly... I just give in to her." (P2)
	Diversity and Inclusivity	Cultural events, bilingual communication	"They invited me to share about Deepavali… also celebrate other festivals." (P1); "They got an emcee that spoke English and Chinese." (P4)

Note. "P1" to "P4" refer to parent interview participants.

DISCUSSION

The findings of this mixed-method study offer an understanding of parents' experiences with childcare providers' communication and their impact on the quality of childcare in Malaysia. By combining both quantitative and qualitative results, it explores key aspects of communication practices and their cultural connections.

Mediums and Patterns of Communication

Effective communication between parents and childcare providers is essential for building trust, fostering collaboration, and aligning childcare practices. The study's findings revealed that in-person communication is the most commonly used method in childcare settings. It offers opportunities for direct and immediate discussions, particularly during pick-up and drop-off times, addressing real-time concerns such as health updates, daily activities, and behaviour. Additionally, the study identified health updates, daily activities, and child behaviour as some of the most frequently discussed topics in these settings. This is supported by a previous study reporting that parents often raise concerns about their child's behaviour, toilet training, social skills, and health (Almendingen et al., 2022). Pick-up and drop-off times not only efficiently address these issues but also help establish rapport between parents and

providers. Mena and her colleagues' (2020) study noted that in-person communication is parents' preferred method as it is more convenient and facilitates personal interaction. According to Bronfenbrenner's ecological systems theory, exchanging concerns and information about the child can foster a sense of transparency and collaboration, which is vital for building trust between parents and providers (Almendingen et al., 2022). The strong bond between the two parties exemplifies the theory's second layer of mesosystem, where one influences the other (Bronfenbrenner, 1977).

The study revealed that most parents preferred in-person communication over digital communication and written reports, mainly because it is easier to convey messages and concerns face-to-face. Still, digital communication, when fully utilised, can boost efficiency. The research found that WhatsApp is among the most used methods of communication after in-person interactions, making it an essential tool for many parents and providers. Its convenience, speed, and accessibility make it a preferred means of sharing updates on daily activities. The study reports that videos and pictures are among the most common contents shared via WhatsApp, offering richer feedback on children's activities in childcare, which parents can replicate at home. This style of communication presents a positive view of childcare in Malaysia, as it facilitates the transfer of knowledge between childcare centres and homes. The research also suggests possible improvements, such as integrating more structured digital tools like custom-built applications. Findings show that these applications are rarely used; even when they are available, childcare providers tend to utilise them less. These tools could enhance communication by offering features like multimedia updates, progress tracking, and centralised platforms for announcements and feedback. Although WhatsApp and in-person communication address immediacy effectively, structured applications have the potential to provide a more comprehensive communication strategy. Combining multiple methods, such as face-to-face updates and built-in applications, would deliver both speed and efficiency while maintaining a personal connection between carers and parents. Despite the benefits of in-person meetings, they lack a record of the child's updates, which digital platforms can easily document.

Furthermore, the study revealed that parenting knowledge is less communicated in childcare settings. This topic should be given more attention, as sharing parenting information fosters alignment and consistency in child-rearing practices both at home and in childcare. Providing parents with resources and practical tips on addressing developmental milestones or behavioural challenges can bridge gaps and reinforce shared goals for the children's growth. According to prior research, such alignment ensures consistency in a child's experiences, which is critical for their social and emotional development (Pirchio et al., 2011; Koivula et al., 2023). Additionally, this alignment and consistency reduce the gap between home and childcare settings, ensuring continuity in caregiving practices. Bronfenbrenner's (1977) ecological systems theory further supports these findings by highlighting the mesosystem – the interconnectedness between home and childcare – as a key factor in a child's development. Sharing knowledge between parents and care providers will promote alignment and consistency in the child's routines at home and in childcare.

Bronfenbrenner's theory indicates that the strength of the mesosystem depends on the quality and frequency of interactions between the microsystems. Based on these findings, childcare centres should actively incorporate parenting knowledge into their communication strategies to enhance collaboration between providers and parents. Existing methods such as digital platforms and face-to-face communication should be utilised to share parenting tips, research-based recommendations, and interactive resources. Organising regular parenting

workshops, distributing educational materials, and including brief discussions during pick-up and drop-off times can effectively support parents in their caregiving roles. By fostering better alignment between childcare providers and parents, these initiatives can create stable and supportive environments that benefit children's overall well-being.

Parents' Satisfaction with Communication in Childcare Settings

Generally, parents are satisfied with communication in childcare settings, although there is room for improvement. Findings from the current study indicate that most parents value timely updates, active consultation, and constructive feedback regarding their child. This suggests that parental involvement is important. The findings are supported by a previous study that noted parents felt supported after communicating with child providers, especially during informal interactions and when provided with resources (Raza, 2019). Further support for the study's findings can also be viewed through the lens of ecological system theory by Bronfenbrenner (1977), which emphasises the importance of child providers' influence on parental involvement. The sensitive responses from child providers foster ongoing communication and information exchange about the child between parents and providers, which in turn offers support to the parents. This support then enhances parent-care provider communication, which is crucial for the child's development. The findings also underscore the importance of approachability and professionalism in communication between parents and childcare providers. A study by Aleksić and colleagues (2024) revealed that communication is affected by parental satisfaction, parental involvement, provider's attitude, and several other factors. The interaction between parental satisfaction, involvement, and the provider's attitude indicates that the provider's demeanour significantly influences communication effectiveness. Additionally, this supports the ecological system theory (Bronfenbrenner, 1977), particularly the mesosystem in parent-provider interactions for effective communication.

The study indicates that parental involvement and provider attitude shape parents' satisfaction with communication. Therefore, training programmes should focus on enhancing childcare staff's interpersonal skills, professionalism, and approachability to promote effective communication with parents. Implementing these strategies can help childcare services improve parental satisfaction with communication.

Influence of Communication Satisfaction on Perceptions of Childcare Quality

The correlation results reveal a strong link between parents' satisfaction with communication and the quality of childcare. Most parents are happy with the providers' communication, as they offer various perspectives on childcare quality, especially regarding the child's health, independence, and parental involvement. Effective communication ensures parents are aware of their child's health status, which is a key aspect of quality childcare (Alkon et al., 2020). Additionally, most parents rated the environment—particularly clean and safe settings—as an important factor for childcare quality. A clean and safe environment reduces the risk of illness, allowing children to be in optimal health for learning. Moreover, according to the ecological system theory popularised by Bronfenbrenner (1977), this setting also fosters a conducive learning environment for children to engage in activities related to their developmental areas, as it constitutes an immediate environment with which children are continually interacting. This reflects the first layer of the theory, known as the microsystem.

Additionally, this study has found that parents value learning and developmental activities in childcare. Research has demonstrated a positive link between children's developmental outcomes and early childhood education and care. Children who attend

preschools tend to perform better in academic achievement and socio-emotional well-being (Lehrl et al., 2016).

Most parents in this study considered activities for children and childcare providers' skills to be the most important aspects of quality in childcare. Furthermore, children's learning is enhanced when childcare providers are well-trained and possess sufficient knowledge of children's development. One respondent specifically highlighted the importance of independence in childcare and even advised parents to follow this example. These three aspects were also emphasised in a previous study on parents' perceptions of childcare quality services across Malaysia (Johan et al., 2019). Additionally, Bronfenbrenner's (1977) ecological system theory supports these aspects by linking them to the microsystem—the immediate relationships that influence children's outcomes—as central to providing high-quality childcare that parents seek.

Despite these positive aspects, some parents express dissatisfaction with the medium and frequency of communication, as well as how well their concerns are addressed. Improving these areas may enhance parents' perceptions of the quality of childcare. In line with previous findings by Mena and her colleagues (2020), this study reinforces the link between effective communication and childcare quality. Parents who receive clear, timely, and engaging communication tend to view childcare services more favourably.

The Role of Cultural Factors in Communication and Childcare Practices

Qualitative findings show that childcare in Malaysia is attuned to the needs of families from diverse cultural and religious backgrounds. They also promote diversity and inclusivity to meet family requirements. Malaysia is a multicultural nation with three main ethnic groups and several indigenous communities. Previous research has indicated that this diversity influences interactions between parents and childcare providers, in line with Bronfenbrenner's ecological system theory of macrosystem (1977). Parents' perceptions of childcare quality are affected by diversity, as are the expectations of childcare providers (Salehuddin and Winskel, 2016). Nizam and colleagues (2024) also emphasised the significance of cultural beliefs and traditions in shaping parents' expectations of childcare quality. Hence, parents' cultural and linguistic backgrounds must be taken into account to facilitate effective communication from parents to childcare providers (Bezcioglu-Goktolga and Yagmur, 2018).

Failure to recognise these elements leads to ineffective communication and discourages parental involvement. One way to bridge this gap is by providing support to families (Sollars, 2020). The qualitative results showed how appreciative the interviewee was of the childcare's effort in hiring a bilingual host for an event to accommodate non-Mandarin speaking parents. The inclusivity that the childcare offers allows parents to communicate and feel more involved in the activities organised by the childcare. Involved parents are shown to have a positive impact on children's development, including the promotion of their mental health and well-being (Yngvesson and Garvis, 2021).

CONCLUSION

Despite the small sample size of the participants, which makes it difficult to generalise, the study provides new and important insights into parent-caregiver communication. The findings highlight the importance of structured communication policies to maximise the effectiveness of communication. By implementing designated time slots for parent-teacher

discussions during pick-up and drop-off, childcare providers can ensure that essential information is consistently conveyed and that all parents have equal opportunities for engagement. Additionally, training providers in active listening, clear and concise information sharing, and culturally responsive communication can strengthen trust and collaboration with parents by addressing concerns related to children's health, behaviour, and daily activities more effectively.

Although in-person communication remains the preferred method, integrating digital tools as a supplementary aid can improve efficiency and offer ongoing documentation. Structured digital applications or WhatsApp updates can provide parents with continuous access to information about their child's activities and well-being, fostering a more comprehensive exchange of information. A balanced approach that combines in-person and digital communication can establish a more transparent and effective system that supports parental involvement and enhances the overall quality of early childhood care.

Beyond enabling smoother developmental progress for children, effective parent-caregiver communication also offers parents emotional and informational support, boosting their confidence in the childcare system. Given these benefits, it is crucial for childcare providers to establish structured communication policies that improve consistency and responsiveness. Future research should involve larger sample sizes and adopt a longitudinal design to track changes in communication practices over time. Additionally, including perspectives from childcare providers would provide a more balanced view of communication challenges and best practices. By addressing these gaps, future studies can help develop more effective communication strategies that support children's developmental outcomes in childcare settings.

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