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Evaluating the quality of information in posts on Instagram related to water birth: A methodological study

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Abstract

The study seeks to assess the utility and informational quality of Instagram postings regarding water birth, an alternative birthing method recently gaining popularity. The two most used hashtags related to waterbirth have been selected: #waterbirth and #birthpool. The Instagram search algorithm identified 376,000 posts for #waterbirth and 13,800 posts for #birthpool. The 'Top 100 posts' related to every hashtag were recorded (n=100). Of the 200 communications 90 were deemed suitable for examining this subject matter. The accuracy of their overall understanding has been evaluated by two independent physicians with a modified DISCERN analysis consisting of five questions. The data clearly shows that 16% (n=15) of the posts were shared by the patient, 50% (n=45) by the physician, and 33.3% (n=30) by the sales company. No substantial difference was observed in the dependability of general information across posts uploaded by physicians, patients, and sales companies ($p>0.05$). When the quality of Instagram posts about water birth was evaluated, no significant difference was observed between the accounts that made the posts. For this reason, it was concluded that the Instagram platform does not contain reliable information about water birth.

Keywords: Birth, database, natural childbirth

Introduction

Social media is one of the fundamental components of communication resources today, and its popularity is increasing every day. Nowadays, social media posts significantly contribute to the dissemination of information of interest, including topics related to childbirth [1]. Pregnant women use social media platforms like YouTube, Twitter, and Instagram due to their accessibility for obtaining insights and information regarding pregnancy progression, the birthing process, and personal birth stories. Moreover, social media can serve for marketing, promotion, and instructional objectives within obstetrics and gynecology [2]. The accuracy and reliability of the information on these platforms are questionable. Information of questionable accuracy can lead to misguidance and adverse outcomes in an important matter like childbirth, which is the first step in the continuity of healthy generations [3,4].

Previous studies utilized various shortened scales [5], including

the Health on the Net Foundation Code of Conduct (HON Code) [6], Global Quality Score (GQS), Journal of American Medical Association (JAMA) score [7], modified DISCERN Scale [8,9], DISCERN Scale [10], and usability scores [11-13] to assess the correctness, validity, and quality of information.

Instagram has emerged as the preeminent platform for photo sharing, boasting 2 billion active users every month. Instagram enables individuals to publish images and videos privately or openly, alongside other social media sites.

People can share materials that allows their followers to comment, endorse, or bookmark. When an investigation is conducted using a hashtag (#), Instagram displays shares associated with that particular hashtag [14-16]. Water birth is an alternative birthing method that has been gaining popularity in recent years and has a history that dates back to ancient times. The pain experienced during childbirth is one of the strongest pains felt, and its management is important for the overall management of the

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process. In water birth, the woman is in warm water that covers her entire abdomen. It is thought that this facilitates relaxation and reduces labor pain. Additionally, this method offers the woman freedom of movement and the option to give birth in a more comfortable environment. During labor, it facilitates the easier adoption of a birthing position that aids fetal descent and regulates blood circulation. It appears to be a viable method for encouraging vaginal birth, provided the necessary conditions are met [17,18].

The literature evaluation indicates a lack of studies examining the quality of water birth-related information on Instagram. In this study, we aimed to investigate the posts on the Instagram platform with the hashtags #waterbirth and #birthpool and evaluate their quality using a modified DISCERN Scale (Table 1).

Table 1. Modified DISCERN score	
Modified DISCERN	
1.	Is the aim clear, concise, and understandable?
2.	Are sources of information reliable? (cited publication, video content was from valid studies, dentists)
3.	Is the information presented balanced and unbiased? (any reference to other treatment choices?)
4.	Are additional sources of information listed?
5.	Does it refer to areas of uncertainty?

Material and Methods

Due to the public availability of the data, ethical committee approval was unnecessary for this study. A new Instagram account has been established to eradicate stereotypes. The study data were collected on August 1, 2024, by a single researcher using the same smartphone to record public Instagram posts. The search hashtags have been identified and listed as "#waterbirth and #birthpool." The initial 100 posts for each hashtag, as chosen by the Instagram search algorithm, have been documented along with their Uniform Resource Locators (URLs) (n=100). The data collected from the two hashtags were refined according to the following criteria for exclusion involve the following: (1) posts that are not written in English, (2) posts with disabled likes and views, (3) duplicate posts, and (4) posts that are irrelevant to the issue. Later, the relevant posts were categorized according to predetermined criteria, including user type (patient/doctor/sales company), post purpose (advertisement/information), and post format (photo/video).

The quality of information contained in postings on Instagram was evaluated using the Modified DISCERN methodology by two independent assessors [7,8]. The responses to the inquiries have been assessed using a "yes" score of 1 and a "no" score of 0, with elevated values signifying more dependability and quality.

After the analysis, the data has been saved to an Excel file. Statistical analysis was performed with Python software (Version 3.8). The Shapiro-Wilk test was employed to assess the normality of the quantitative data. Abnormal distributions have emerged in

all three groups (p<0.05). The Kruskal-Wallis test was conducted to evaluate the significance of the DISCERN Score among different user groups.

Results

The aggregate of posts associated with the two specified hashtags is 389,800, predominantly under the #waterbirth hashtag, which comprises 376,000 posts. All 200 recorded posts are in English. 19 posts with disabled liked and views, 4 duplicating posts, and 87 unnecessary posts have been eliminated.

90 posts were categorized as patient / doctor / sales company according to predetermined criteria. The Shapiro-Wilk normality test was conducted to determine whether the quantitative evidence for the Modified DISCERN Score follows a distribution that is normally distributed.

The test results revealed that none of the three groups demonstrated a normal variance for the Modified DISCERN Score (p<0.05). The Kruskal-Wallis test was conducted to evaluate the statistical significance between the groups. The derived p-value suggests that no significant difference exists across the three user groups (p>0.05). This result indicates that the differences between the groups may be random. The mean values and standard deviations of the groupings are as follows: The mean modified distinguish score for the patient group is 0.20±0.42, for the physician group is 0.82±1.31, and for the sales business group is 0.29±0.52 (Figure 1).

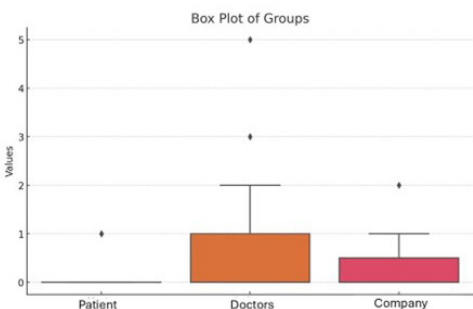


Figure 1. Group means and standard deviations

Discussion

The findings of this study indicate that there is no significant difference in the quality of information among user types regarding posts about water birth on Instagram. Inaccurate and incomplete social media posts regarding pregnancy and labor can be detrimental and result in adverse consequences.

Research evaluating the educational value of social media content in obstetrics and gynecology has employed platforms including Instagram [19,20], YouTube [21], Twitter [19], and TikTok [22].

Considering that Instagram has recently become a trade platform for the youth population, the reliability and functionality of Instagram posts have been evaluated [23].

Recently, with expectant mothers wanting to prefer natural childbirth, water birth, which has been increasing in frequency and popularity, has become a method of childbirth frequently researched by pregnant women on social media. For this study, hashtags accompanying the expression #waterbirth in posts have been identified.

The analysis includes the two most shared hashtags pertinent to the topic. Prior research has examined "recent," "random," or "top" posts [24,25]. The "Top 200 posts" associated with the various hashtags were analyzed based on the participants' search approach.

Ninety postings concerning water birth have been examined, emphasizing user type, post intent, and post format. The group consisting mostly of doctors has made the most contributions related to the topic, accounting for 50% of the total contributions. While some of the posts aim to advertise, others aim to inform the public. Those intended for advertising purposes make up the larger portion of the shares at 78.8%. The most common format is photos, which make up 62.2% of the shares.

The purpose of this study is one of the initial evaluations of the information quality about water birth content on Instagram, employing the Modified DISCERN method. The Modified DISCERN tool may assess the quality of information across several social media networks [9,25,26]. The revised DISCERN scale suggests that the information presented in Instagram posts is either erroneous or of insufficient quality. The cause of this may be the use of unsuitable hashtags, advertising strategies, personal endorsements, or the offering personalized advice [27,28]. The average modified DISCERN score of doctor, patient and sales company accounts is similar. In fact, the expectation is that the information quality of the profiles shared by doctors is higher. However, this may have been because the purpose of doctors' posts is often advertising and the content is not detailed to convey information. It is thought that increasing the quality and information content of doctors' posts about water birth will encourage expectant mothers to prefer natural birth.

Conclusion

Social media and the internet can significantly shape pregnant women's perceptions of childbirth approaches. Consequently, pregnant women must exercise caution regarding the credibility and origin of material in their investigations on this subject.

The more active the accounts of obstetricians and gynecologists are, and the more their posts are supported by evidence-based content, the higher the likelihood that pregnant women will access accurate information. This study possesses several drawbacks.

A restriction is that, despite Instagram being a constantly changing platform, the investigation of hashtags and posts has been restricted to a specific time frame. Future research will be advantageous if it includes the analysis of Instagram posts at different periods of the year. Another constraint is that only posts in English have been considered. The situation regarding water births should be re-evaluated with multinational studies.

Conflict of Interests

The authors declare that there is no conflict of interest in the study.

Financial Disclosure

The authors declare that they have received no financial support for the study.

Ethical Approval

Due to the public availability of the data, ethical committee approval was unnecessary for this study.

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