

How to Engage Men in Preconception Health?: A Scoping Review

Abstract

Background: Men's engagement in maternal and child health care in the preconception health forum is essential because it allows primary prevention of maternal and infant mortality and morbidity. This review aimed to identify strategies to engage men in preconception health. **Materials and Methods:** This scoping review was conducted from August to September 2022. The database searches included PubMed, EBSCO, and ProQuest from 2012 to 2022, related to men's involvement in reproductive health, preconception health, family planning, maternity, and infant care; articles written in English; national (Indonesia) and international articles; and appropriate thesis. The searched keywords were man/male role, premarital, preconception, reproductive health, and fertility. **Results:** The electronic searches turned to 1969 articles, 16 of which met the inclusion criteria and were selected for study analysis. This review identified three themes: identifying programs that are sensitive to the limitations of men; developing community outreach strategies; and engaging management principles, policy, and legislation. **Conclusions:** Efforts to engage men in preconception health can be complicated, but several strategic programs have demonstrated some success. Subsequent programs that require men's participation in preconception health services must be sensitive to the identified barriers.

Keywords: Engagement, men, preconception care

Introduction:

Preconception health is crucial in pregnancy outcomes and the long-term health of children and future generations.^[1] Besides, premarital screening has reduced the prevalence of genetic blood disorders (sickle cell anemia, thalassemia) and infectious diseases (hepatitis B, hepatitis C, and human immunodeficiency virus/acquired immunodeficiency syndrome).^[2-9] The ultimate objective is to improve maternal and child health outcomes. Preconception care encompasses the time before the first pregnancy and between subsequent pregnancies.^[10] The purpose of preconception services is not only to improve the health of prospective mothers but also to engage prospective fathers. In addition, involving men in their partner's reproductive decision is also essential for achieving reproductive health indicators.^[11] It is necessary to prepare married couples with healthy reproductive lives so that they can have a healthy pregnancy, childbirth, postpartum, and breastfeeding period and produce healthy offspring for the next generation.^[12]

The high maternal mortality rate in developing countries is partly influenced by local sociocultural factors. Pregnancy, childbirth, and childcare are considered to be women's responsibilities. Hence, the impacts include a low level of men's engagement in women's health issues (45%).^[13] Men's engagement in maternal health care is when a male partner provides emotional and physical support to a woman while actively participating in making decisions together.^[14] Women who receive support from their spouse during pregnancy and breastfeeding will feel empowered to reduce stress and difficulties during the perinatal period.^[15]

Men and women are equally important to preconception health, given their respective roles in the reproductive health,^[16] and men are viewed as playing a crucial role. Most maternal and child health professionals consider how men can support the health of their partner and children. However, it is difficult to involve men in reproductive health issues (especially preconception health). It requires political, programmatic, and professional struggles.^[17] Currently,

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the number of studies on changing cultural perspectives involving men in reproductive health and child development is expanding, for example, studies conducted by Pokhrel *et al.*, Nesane *et al.*, Ongolly *et al.*, Firouzan *et al.*, Craymah *et al.*, Shand and Marcell, and Davis *et al.*^[18-24] However, to the best of researchers' knowledge, there is still limited research on scoping review on how to engage men in reproductive health. Knowing various efforts to engage men in reproductive health, it is hoped to become a discourse for healthcare professionals and stakeholders in making decisions for program development. This scoping review contributes to identifying how men can be involved in preconception health.

Materials and Methods

This scoping review was conducted from August to September 2022. Inclusion criteria for this study: 1) publications in the last 10 years (2012–2022); 2) articles written in English; 3) national (Indonesia) and international articles; 4) related to men's involvement in health reproduction, health preconception, family planning, maternity, and infant care; and 5) appropriate theses. Articles that do not contain information about preconception health, animal research, study protocol, and an opinion are excluded from this study.

An electronic search was conducted using PubMed, EBSCO, and ProQuest. The documents (articles and theses) were selected based on the inclusion criteria and followed the PRISMA Extension for Scoping Reviews (PRISMA-ScR) protocol to report the findings.^[25] Keywords used to find articles related to identifying how men can be involved in preconception health are attached in Table 1.

The first author (SAA) conducted the article search and discovered duplicates by using the reference manager (using Zotero). The process continued to select the eligible criteria by SAA and ENH. Furthermore, all authors (SAA, YSP, MH, and ENH) as independent auditors or subject matter experts evaluated the quality of the preceding articles/publications using The Joanna Briggs Institute (JBI), providing evaluation instruments. The relevant paper titles, abstracts, and complete texts were evaluated sequentially. Data extraction was done by analyzing data based on the authors' name, title, samples, level of evidence, location, and key finding.

Ethical considerations

The researchers consistently maintained impartiality in analyzing the data gathered from the articles, upholding ethical standards throughout the study. This research received approval from the Medical and Health Research Ethics Committee, Faculty of Medicine, Public Health, and Nursing at Universitas Gadjah Mada, Indonesia, under project code KE/FK/1019/EC/2022, issued August 2, 2022. The authors actively work to prevent any form of redundant

Table 1: Keywords of searches

Elements	Keywords
Population	(Man role) OR (male role) OR (premarital role) OR (couple role) OR (boyfriend role) OR (paternal role) (Man contribut*) OR (male contribut*) OR (couple contribut*) OR (boyfriend contribut*) OR (paternal contribut*) AND
Exposure/ Intervention	(healthy reproductive) OR (healthy preconception) OR (healthy pregnancy) OR (health) OR (participation improve*) AND
Outcome	(preconception) OR (reproductive health) OR (pregnancy*) OR (fertility) OR (premarital) NOT infertility NOT adolescen* NOT diabet* NOT Cancer NOT animal*

publication and plagiarism. They reported the findings of their analysis with complete integrity, without falsifying or altering data for personal advantages.

Results

The literature search generated 1969 articles, with 55 duplicates removed, resulting in 1,914 articles for title and abstract screening [Figure 1]. After the initial screening, we excluded 1824 articles based on the study criteria and left 90 for the full-text review. Finally, we got 16 included articles to extract. Excluded articles following this stage were about antenatal, prenatal, and postnatal periods; animal research; transgender; HIV; children; partner violence; research protocol; did not discuss men's involvement; and opinion articles.

The data extraction is shown in Table 2. As many as 16 publications included articles that addressed attitudes toward men participation in preconception health. The ages of the sample populations ranged from 15 to 80 years old. Studies were conducted in predominantly rural areas across four continents (Asia, Africa, America, and Australia). The studies reviewed consist of six qualitative studies, eight quantitative studies, and two review studies. We conducted a qualitative content analysis by identifying the characteristics of the message content in each article and obtaining the themes [Table 3]. Three major themes were identified: identifying the programs that are sensitive to males' limitations; developing community outreach strategies; and engaging management principles, policy, and legislation.

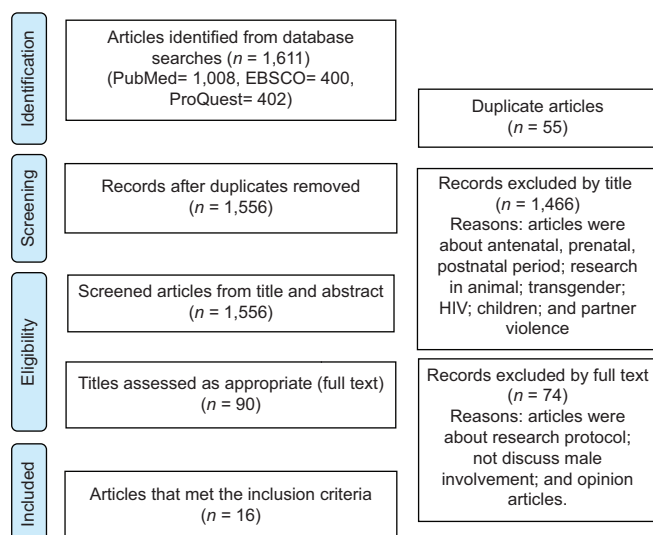


Figure 1: PRISMA diagram of the study selection^[25]. SHAPE * MERGEFORMAT SHAPE * MERGEFORMAT

Identifying the programs that are sensitive to males' limitations

The suboptimal male involvement in health reproductive can be attributed to several factors, including household economic problems, feminization, and stigma related to reproductive as well as mother and child health activities^[38] or gender norms that consider reproductive health as women's responsibility^[39]; masculinity^[35]; knowledge^[39,31]; education; attitude; male consciousness; sociocultural, psychological, and health system factors; and inadequate access to services.^[39] In addition, men are usually less receptive to advice regarding fertility or health preconception when receiving services from a general practitioner.^[33]

Developing strategies to outreach the community

The home visit strategy is an effective method for engaging men in preconception health. One of them is the Community-Based Health Planning and Services (CHPS) strategy of providing family planning health information door-to-door in an effort to alter men's perceptions of family planning and contraceptive use.^[26] According to other sources, home visits can increase men's knowledge about maternal and child health, thereby contributing to the improvement of maternal and child health.^[41]

Another strategy to increase men engagement is involving key figures in society, such as policymakers,^[40] male champions^[30] or some kind of health care,^[34] teachers,^[38] and religious leaders^[32,34,38] through the dissemination of preconception health information on media (television, radio) or religious dialogs.^[32,34] In addition, there is evidence that sexuality programs that involve partners through Couple Oriented Counseling (COC) activities are effective at increasing men involvement.^[37]

The literature review conducted by Burns *et al.*^[36] revealed that social support, health worker engagement, access to

quality health care, and trust in the health care provider system facilitate men's engagement in sexual reproductive health. Pride is also one of the factors that facilitate men participation. Men are proud when they are motivated by health visits from the government or when they are involved in identifying healthy children in their community.^[30]

The interactive workshop had a significant effect on gender attitudes. The participant's enthusiasm showed the community-level social and behavior change communication strategy addressing gender norms in the area of sexuality and family planning effectively.^[28] Inviting men to participate in preconception health services through their partners, either verbally or with notification cards, and incorporating preconception health socialization into monthly meetings are also effective strategies.^[29]

Engaging management principles, policy, and legislation

The perceived barriers facilitating men involvement in sexual health are related to service management principles, policies, laws, and health resources.^[27] Policymakers and legislators need to be more aware that gender dynamics have changed. The involvement in maternal and child health activities is needed not only by women; men also play a significant role in this process. By considering men's roles, the perceived barriers facilitating men involvement in sexual health are related to service management principles and policies.^[30]

Incentives and disincentives are cited as drivers of men participation in maternal and child health by hospitals and traditional authorities. A system of incentives and disincentives is implemented to encourage men to accompany their partners to antenatal care visits. Women who present to antenatal care with their partners will get the first services. If the pregnant woman attends antenatal care without a partner, she will either receive the last service or not receive it until they return with their partner. However, this system reaps the pros and cons related to patient queue discrimination.^[30]

Discussion

This scoping review aimed to identify the strategy to engage men in preconception health. We identified three themes regarding how to engage males in preconception healthy: identifying the programs that are sensitive to males' limitations; developing strategies to outreach the community; and engaging management principles, policy, and legislation.

According to studies, the dominant culture in society continues to adhere to masculine characteristics and unfair gender norms.^[16] According to the literature, traditional patriarchal cultural values regarding masculinity, male dominance over women, and gender inequality endanger women's reproductive health.^[42-44] Men's reproductive health service programs should improve the quality of respect,

Table 2: Summary of reviewed articles

Author, year	Title	Sample	Level of Evidence	Location	Key findings
Adongo <i>et al.</i> , 2013 ^[26]	The Role of CHPS* Strategy in Involving Males in The Provision of Family Planning Services: A Qualitative Study in Southern Ghana	48 females and 42 males. All participants were married and had between 2–5 children. The age distribution of participants was between 18–59 years.	Qualitative descriptive study	Rural Northern Ghana	The CHPS strategy was perceived as very helpful. Males were more involved in family planning services in communities with functioning CHPS's door to door strategy.
Jooste, K and Amukugo, HJ, 2013 ^[27]	Male Involvement in RH**: A Management Perspective	10 individual interviews: four male partners, three female partners and three nurse managers.	A qualitative exploratory	Northern region of Namibia	The management principles, policy, and legislation, as well as resources to facilitate male involvement in RH, were indicated as barriers for nurse managers to facilitate male involvement.
Schuler <i>et al.</i> , 2015 ^[28]	Interactive Workshops to Promote Gender Equity and Family Planning in Rural Communities of Guatemala: Results of a Community Randomized Study.	Males and females. Mean age 31 years (intervention group) and 29 years (control group). The mean number of living children per couple was 3.0 (intervention group) and 2.2 (control group).	A Community Randomized Study	Rural Guatemala	The intervention showed statistically significant effects on two of the three outcomes examined: gender attitudes and contraceptive knowledge.
Msovela, J and Tengia-Kessy, A, 2016 ^[29]	Implementation and acceptability of strategies instituted for engaging men in family planning services in Kibaha district, Tanzania.	As many as 365 of currently married or cohabiting men had at least one child under the age of five years.	Mixed method design	Rural and urban Kibaha district, Tanzania	Strategies to engage men in family planning services: invitations through their spouses, verbally or by using partner notification cards, family planning messages during monthly meetings, and community outreach through reproductive health programs.
Mkandawire, E and Hendriks, SL, 2018 ^[30]	A qualitative analysis of men's involvement in maternal and child health as a policy intervention in rural Central Malawi	Total 63 participants (26 were informants and 37 were community members). The majority of participants were women ($n=44$). The age of participants ranging from 19 to 80 years.	A qualitative study	Rural Malawi	Five themes facilitate men's involvement: men's recognition of the benefits of participation; pride; advocacy; incentives and disincentives by health care providers and Traditional Authorities; and encouragement from male champions.
Sharma S, Kc Bhuvan, Khatri A, 2018 ^[31]	Factors Influencing Male Participation in Reproductive Health: A Qualitative Study	FGDs***: male teachers in two schools (Secondary School and Higher Secondary School) of Bungamati, Lalitpur. In-depth interviews: seven key informants of the health facility.	A qualitative study	Rural Bungamati, Nepal	Perceived motivating factors: positive attitudes in men, literacy, awareness, the inclusion of reproductive health in the school curriculum, and incentives.
Speizer <i>et al.</i> , 2018 ^[32]	Association of men's exposure to family planning programming and reported discussion with partner and family planning use: The case of urban Senegal.	Men aged 15–59 years	A cross-sectional survey	Urban Senegal	Men who were exposed to a religious leader speaking favorably about FP**** were more likely to report using FP and discussing FP with their spouse. Radio activities were associated with FP discussion and television exposure was associated with FP use. There was an association between community-based activities and these outcomes.

Contd...

Table 2: Contd...

Author, year	Title	Sample	Level of Evidence	Location	Key findings
Hogg <i>et al.</i> , 2019 ^[33]	Men's Preconception Health Care in Australian General Practice: GPs***** Knowledge, Attitudes and Behaviors.	304 GPs	Survey	Urban, rural, and remote Australia	To facilitate discussions about fertility or preconception health, it needed trustworthy websites and factsheets.
Nkwonta CA and Messias DKH, 2019 ^[34]	Male Participation in Reproductive Health Interventions in Sub-Saharan Africa: A Scoping Review.	Articles from Google Scholar and PubMed search engines; the ScienceDirect search interface; and the MEDLINE***** Global Health, PsycINFO***** and CINAHL*****.	A Scoping Review	Sub-Saharan Africa	Interventions engaged participants by using such strategies as community health workers, written invitation, peers, community or religious leaders and media campaigns.
Endut <i>et al.</i> , 2020 ^[35]	The Influence of Men's Masculine Gender-Role Attitude and Behavior on Sexual Relationships and Reproductive Health in Malaysia: A Cross-Sectional Study.	168 men of ages 20–64 years	Cross-sectional study	Urban Malaysia	Men's traditional behavior and controlling nature are positively associated with the inequality in sexual relationships and reproductive health.
Burns <i>et al.</i> , 2021 ^[36]	Engaging Young Black Males in SRH***** Care: A Review of the Literature.	Articles from CINAHL, PsycInfo, PubMed, and Scopus online data bases.	Review	Online databases.	The facilitators for utilizing SRH care: health clinic engagement, social support, access to quality health care, and trust in the health care system and providers.
Kengne-Nde <i>et al.</i> , 2021 ^[37]	COC***** Improves Male Partner Involvement in Sexual and Reproductive Health of a Couple: Evidence from the ANRS PRENAHTEST randomized trial	484 pregnant women enrolled with an age median of 27 years. 55.23% of respondents had a gestational age greater than 16 weeks at ANC-1***** and HIV***** (11.9%).	Randomized prenatal multicentric trial	Urban Cameroon, Dominican Republic, Georgia and India	The partners of the women who participated in the COC were more likely to be involved during follow-up than others.
Lusambili <i>et al.</i> , 2021 ^[38]	Male Involvement in RMNCH*****: An Evaluative Qualitative Study on Facilitators and Barriers from Rural Kenya.	Ten FGDs and 11 key informant interviews. Key informants were males and females at the county, subcounty, and health facility levels.	A qualitative study	Rural Kisii and Kilifi counties, Kenya	Effective male engagement when delivered by male authority figures such as church leaders, male champions, and teachers. Suboptimal male engagement arises from tensions men face indirectly contributing to the household economy and participating in RMNCH activities.
McLean, KE; Thulin, EJ, 2022 ^[39]	“If the Woman Doesn't Prevent, You Will Become Pregnant”: Exploring Male Involvement in Contraceptive Use Preceding Unplanned Pregnancy in Sierra Leone	As many as 106 fathers between the ages of 18–39 years.	Qualitative research	Rural and urban Kono District of eastern Sierra Leone	Barriers for men's participation in family planning: inadequate knowledge about contraception, poor access to services, and gender norms that consider family planning a woman's responsibility.

Contd...

Table 2: Contd...

Author, year	Title	Sample	Level of Evidence	Location	Key findings
Diamond-Smith et al., 2022 ^[40]	The Development and Feasibility of a Group-Based Household-Level Intervention to Improve Preconception Nutrition in Nawalparasi District of Nepal	In-depth interviews: newly married women, their husband, and mothers-in-law (n=60). A longitudinal study (18 months): 200 newly married women. A pilot intervention: 90 participants.	Mixed methods study	Rural Nawalparasi district of Nepal	Participants felt the program impacted their lives by strengthening relationships and trust, understanding each other, and changing behaviors.
Cockcroft et al., 2022 ^[41]	A Universal Home Visits Improve Male Knowledge and Attitudes about Maternal and Child Health in Bauchi State, Nigeria: Secondary Outcome Analysis of a Stepped Wedge Cluster Randomized Controlled Trial.	6931 men were involved in the intervention group and 9434 men in the control group.	Secondary outcome analysis of a stepped wedge cluster randomized controlled trial.	Urban and rural Bauchi State, Nigeria	Universal home visits improved knowledge of male spouses about maternal and child health, which could contribute to improve maternal and child outcomes.

* CHPS=Community-Based Health Planning and Services. **RH=Reproductive Health. ***FGDs=Focus Group Discussions. ****FP=Family Planning. *****GPs=general practitioners. *****MEDLINE=Medical Literature Analysis and Retrieval System Online. *****PsycINFO=Psychological Information. *****CINAHL=Cumulative Index to Nursing and Allied Health Literature. *****SRH=Sexual and Reproductive Health. *****COC= Couple Oriented Counselling. *****ANC-1=The first Antenatal Care. *****HIV=Human Immunodeficiency Virus. *****RMNCH=Reproductive and Maternal and New Child Health

service options, confidentiality, and compassion.^[36] The lack of options in health services is caused by the prevalence information aimed at women.^[30] A similar result was shown by Endut's research, which discussed the importance of considering the traditional view of masculinity when involving men in matters relating in sexual and reproductive health.^[35] According to another study, the majority of men are reluctant to visit a health clinic due to opportunity costs. They will have to sacrifice time and abandon their primary source of family income.^[30] Several approach strategies that involve the community can be a discourse in reducing the limitations of men on their role in reproductive health.

The results of other studies also mention that having a "Male Champion" or a distinct man as a healthcare provider can increase men's participation in preconception health efforts. They are responsible for conveying the message of "safe motherhood" to men in a community as well as facilitating the participation of men.^[30,45] Sexuality health issues, which are still considered taboo,^[30,46] require these health care to carry out door-to-door visits discreetly and encourage men to be involved in maternal and child health and attend reproductive care.^[30] Peer support is necessary to encourage men involvement in preconception health.^[34] This is also expressed by Moyo et al.,^[47] who highlighted how the use of preconception health campaigns through male peers could encourage other men to visit reproductive health clinics.

Online media such as trusted websites become recommendations for General Practitioners (GPs) in

discussing preconception health issues (fertility) with men. According to a study of GPs, it was found that the majority of general practitioners (90%) were unsure of their knowledge of the factors that affect male fertility. Lack of knowledge and male sensitivity and the perception that preconception health (fertility) is women's issue were identified as barriers to preventing male patients from discussing fertility and preconception health with their general practitioners. They planned to use credible websites and fact sheets as discussion forums to bridge this gap.^[33]

Dukes and Palm advocate for policy and system-level changes in the context of reproductive justice and support for young fathers, such as early intervention; adoption of a diverse family systems perspective; a continuum of parent education and support services that include fathers; and collaboration between service sectors. Efforts at early intervention capitalize on the receptivity and motivation of young men during the transition to fatherhood.^[48] Additionally, it increases paternal capacity and participation during a time of vulnerability for both mother and child.^[49,50]

Regarding all the results, this study revealed that the majority of the reproductive health programs are held in low-middle-income countries; the reproductive health gap between developed and developing countries remains very large. According to research by Pillai et al.,^[51] existing approaches to enhancing reproductive health in developing countries prioritize economic and social development. The

Table 3: Result synthesis

Similar articles published in the journal	Finding	Theme
Lusambili <i>et al.</i> , 2021 ^[38] ; McLean and Thulin, 2022 ^[39] ; Endut <i>et al.</i> , 2020 ^[35] ; Sharma <i>et al.</i> 2018 ^[31] ; Hogg <i>et al.</i> , 2019 ^[33] ; Mkandawire and Hendriks, 2018 ^[30] ; Burns <i>et al.</i> , 2021 ^[36]	The review results found that a program that can reach male participation must pay attention to the limitations of their experience in society, such as stigma, masculinity, taboo, and opportunity cost.	Identifying programs that are sensitive to male limitations
Lusambili <i>et al.</i> , 2021 ^[38] ; Hogg <i>et al.</i> , 2019 ^[33] ; Burns <i>et al.</i> , 2021 ^[36] ; Mkandawire and Hendriks 2018 ^[30] ; Adongo <i>et al.</i> , 2013 ^[26] ; Cockcroft <i>et al.</i> , 2022 ^[41] ; Diamond-Smith <i>et al.</i> , 2022 ^[40] ; Nkwonta and Messias, 2019 ^[34] ; Speizer <i>et al.</i> , 2018 ^[32] ; Kengne-Nde <i>et al.</i> , 2021 ^[37] ; Schuler <i>et al.</i> , 2015 ^[28] ; Msvela and Tengia-Kessy 2016 ^[29] ; Mkandawire and Hendriks 2018 ^[30] ; Jooste and Amukugo 2013 ^[27]	Some strategies implemented to encourage male involvement in preconception health were through a home visit strategy, involving key persons, online media, interactive workshops, and invitations. Management, policy, and legislation were needed to encourage male involvement in preconception health.	Developing strategies to outreach the community Engaging management principles, policy, and legislation

increase in income brought about by economic development in developing nations has been shown to be a significant factor in enhancing public health, including reproductive health. Social institutions play a crucial role in translating economic gains into reproductive health improvement through health services expansion, such as prenatal care, immunization, and nutrition education. Generally, research shows that economic development has direct and indirect effects on reproductive health through social enhancement.

The authors acknowledge that this scoping review has limited the database. Several reputable journal databases, including ISI (Institute for Scientific Information), have yet to be utilized. It may result in the omission of articles exclusive to this database. Limitations also occurred in English language publications. It may exclude men's engagement in preconception health strategies published in journals other than English. Despite having limitations, this research has strengths, particularly in its systematic search system based on PRISMA guidelines, using keywords designed to be as sensitive as possible to capture data and having the results reviewed by more than one reviewer. Furthermore, the findings of this study could be beneficial as guidance for healthcare professionals and stakeholders to enhance men's involvement in reproductive health.

Conclusion

Efforts to involve men in preconception health are complicated. Various strategies were conducted by socializing preconception health to the community, house visits involving key figures, using online media, interactive workshops, and invitations. Subsequent programs requiring men's participation in preconception health should be sensitive to the obstacles encountered by the earlier programs.

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Conflicts of interest

Nothing to declare.

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