Acceptability of a nationwide scabies mass drug administration (MDA) program in Fiji: a qualitative interview-based study

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Summary

Background Fiji has among the highest global reported prevalence of scabies. Mass drug administration (MDA) has been identified as a potentially effective strategy to control scabies, but acceptability of MDA from the perspectives of people receiving and delivering scabies MDA programs remains underexplored in Fiji and globally.

Methods A qualitative study was conducted after completion of the national MDA campaign. Participants included 44 community members and 12 key informants across the Central and Western Divisions of Fiji. Semi-structured face-to-face and virtual interviews were conducted in August and September 2023. An interpretive research approach was adopted, and data were analysed using deductive and inductive techniques.

Findings We identified several barriers and facilitators to scabies MDA acceptability. Facilitators included prior experiences of scabies and knowledge of the potential health benefit of MDA, community attitudes to MDA and neighbours' adherence practices, endorsement of MDA by community leaders, community consultation and exposure to community sensitisation, and involvement of local key informants during planning and implementation. Barriers included a lack of trust in MDA campaigns, religious beliefs, limited reach of community sensitisation, and challenges to implementing MDA in urban locations.

Interpretation This is the first qualitative study documenting acceptability of a nationwide scabies-MDA globally. It identified diverse socio-structural factors that influenced MDA implementation and acceptability. Future MDA programs could benefit from widespread community sensitisation, tailored approaches to urban and rural MDA design and delivery, and the inclusion of communities in the co-design and implementation of MDA programs.

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Introduction

Scabies is a global public health and social issue, with an estimated 455 million new cases worldwide each year.[1] Classified by the World Health Organization (WHO) as a neglected tropical disease (NTD), scabies is a skin condition caused by infestation with *Sarcoptes scabiei* mites. It is primarily transmitted through skin-to-skin contact and can spread easily throughout households, schools, and healthcare settings. The disease is highly prevalent in many low-and middle-income countries (LMICs), particularly in Pacific Island countries,[2] where access to effective treatment is limited, the climate is hot and humid, and crowded housing arrangements increase the opportunity for transmission.[3,4] Infestations can cause secondary bacterial skin infection, which may in turn lead to systemic complications including

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Research in context

Evidence before this study

Scabies is endemic to many Pacific Island countries, including Fiji, which has among the highest reported prevalence of scabies globally. Mass drug administration (MDA) has been identified as a potentially effective strategy to reduce the prevalence of scabies and secondary skin infections. We searched PubMed from inception to June 2024, using combinations of search terms that focused on 'acceptability', 'scabies', 'MDA', 'neglected tropical diseases', and 'qualitative research'. No language restrictions were applied to these searches. The search revealed just one paper reporting qualitative data on community perceptions of MDA for scabies control in the Asia Pacific region. This paper, written by our team, demonstrated MDA is a familiar treatment approach in Fiji and community supported its use to control scabies, although some concerns regarding adverse effects were noted. There are no published studies on acceptability of a nationwide scabies-MDA. Subsequently, there is a gap in social science research exploring the acceptability of scabies-MDA in the Asia Pacific region to inform scabies control efforts.

Added value of this study

This is the first qualitative study to explore acceptability of a nationwide scabies-MDA globally. Our results highlight a range of diverse, locally-situated, individual, interpersonal and institutional influences on acceptability of MDA for scabies control in Fiji. MDA was accepted due to knowledge of scabies and experience of a previous similar program, community attitudes, awareness about the MDA campaign, and involvement of local key informants at each stage of MDA planning and delivery. Perceived barriers to MDA included mistrust in MDA campaigns, religious beliefs, lack of access to information prior and during the MDA campaign, and difficulties in MDA delivery in urban areas. These findings provide valuable insights to improve the design, implementation and acceptability of future MDA programs in Fiji and the broader Asia Pacific region.

Implications of all the available evidence

Our findings highlight several key strategies national MDA programs could consider when designing and implementing their programs to maximise acceptability. We suggest it is essential to involve communities in the co-design and delivery of MDA programs and ensure community sensitisation and MDA delivery strategies are locally situated and context specific for diverse urban and rural settings. Importantly, the role of communities in MDA programs should go beyond involvement in the distribution of information or drugs to instead drawing on local knowledge and expertise from the point of program conception.

septicemia, kidney disease and possibly rheumatic heart disease.[3,5] The social impacts of scabies include diminished quality of life through disrupted sleep, reductions in school or work performance, and experiences of stigma, discrimination and social isolation.[6–8]

Mass drug administration (MDA), a form of preventative chemotherapy, whereby medicines are distributed to the entire population or at-risk population in a given setting, irrespective of the presence of symptoms or infection is considered a vital tool for the control of several NTDs globally, including scabies.[9–11] In high prevalence small-island settings, ivermectin-based MDA has been demonstrated to be an effective control strategy for scabies, reducing prevalence by around 90%.[12,13] The control of scabies through MDA is considered key to achieving targets set out in the WHO Roadmap for NTDs 2021–2030 and the Sustainable Development Goals, and the use of MDA is recommended by WHO in areas where community prevalence is greater than 10%.[14] However, limitations to MDA for scabies control remain, including the need for repeated MDA rounds to maintain low prevalence, difficulty of achieving high population coverage, lack of safety data for ivermectin in children <15 kg, and the potential for the development of drug resistance.[3]

Fiji has among the highest global reported prevalence of scabies.[2,4,15] A national survey conducted among over 10,000 Fiji residents reported an estimated national scabies prevalence of 18.5%, with prevalence highest among children aged five to nine years (43.7%) and nearly twice as high among iTaukei (Indigenous Fijians) compared to Indo-Fijians (27.4% and 14.7% respectively).[4] Ivermectin-based MDA has been identified as a highly effective strategy to reduce the prevalence of scabies and secondary skin infections in Fiji.[9,12,16] Building on this evidence and translating research into practice, the World Scabies Program was established to collaborate with governments and partners in establishing national public health programs for the elimination of scabies and its complications in countries where scabies is endemic. In 2022–23, the program implemented the world's first nationwide control program in the Solomon Islands and Fiji using ivermectin-based MDA.

As the global use of MDA to control scabies expands, examining acceptability of MDA from the perspectives of those receiving and delivering treatment is essential to inform implementation strategies for this NTD control approach going forward. To date, there has been little research of this kind in Fiji or other scabies endemic countries in the Asia Pacific region, or globally.[17] To address this knowledge gap, we conducted a qualitative study among community members and key informants to document acceptability of MDA for

scabies control in two divisions of Fiji, Central Division and Western Division. The purpose of the research was to identify factors that may optimise delivery and acceptability of future national MDA programs in Fiji and elsewhere.

Methods

Study design and context

Geographically, Fiji consists of over 330 islands, of which about one third are permanently inhabited, spanning across 1.3 million square kilometers of the South Pacific Ocean.[18] Almost three quarters of the estimated 884,887 population reside in the Central and Western Divisions of Fiji situated on the largest island of Viti Levu. This includes Fiji's capital Suva, the urban towns of Nadi and Lautoka, and smaller settlements and villages. Fiji comprises of two main ethnic groups, iTaukei (those whose ancestry is Melanesian in origin) and Indo-Fijian (those whose ancestry can be traced to India).[19] English is used widely in Fiji and is the principal language of government, education and business.

This qualitative study was conducted in the context of a world first nationwide ivermectin-based MDA program (henceforth the program) designed to eliminate the spread of scabies throughout Fiji. Led by the World Scabies Program in partnership with the Fiji Ministry of Health and Medical Services, this was the first global program dedicated to the elimination of scabies as a public health problem. The program conducted MDA across all divisions in Fiji between October 2022 and June 2023. A widespread community awareness campaign was implemented prior to MDA. Information dissemination took place through community leaders, healthcare professionals, media and posters. The MDA targeted all age groups and consisted of two doses of ivermectin given 7–14 days apart. Permethrin was given to participants if ivermectin was contraindicated. There was higher coverage in rural areas compared to urban. There were a small number of refusals and reasons given included fear of adverse side effects, religious beliefs, negative experiences during prior COVID-19 vaccination campaign, and pregnant or breastfeeding at the time of MDA.

An interpretive research approach—which facilitates access to subjective, socially-situated insider understandings and perceptions of health issues[20]—was employed to achieve the research aims. Our analysis presents community members' and key informants' knowledge of scabies and perceptions of MDA for scabies control. The broader aim was to identify and understand program successes and limitations to inform program improvements.

Participants

Community members were residents of three villages, two peri-urban settlements and one urban settlement in the Western and Central Divisions of Fiji located on the main island of Viti Levu. The study was conducted during August and September 2023 after the completion of the MDA campaign. Purposive sampling techniques were used to recruit participants based on ethnicity, gender and location (village, peri-urban settlement, urban settlement).[21] Community networks (village leaders, community health workers and zone nurses) were asked to disseminate information about the study (recruitment materials and dates the research team would visit) to their communities. The research team then provided information to potential participants on the day of recruitment. Subsequently, snowball sampling techniques were used, whereby existing research participants were asked to provide information about the study to other community members they know.[21] Due to the higher burden of scabies among the iTaukei population (especially among children) compared to the other main ethnic group in Fiji (Indo-Fijian), we recruited a larger number of iTaukei into the study. More female participants were also recruited to reflect the gendered division of labour in Fiji, where women are primarily responsible for childcare, including scabies management and treatment seeking practices.[6] Despite our best efforts, we were unable to locate and recruit community members into the study who had refused treatment, possible due to the low levels of refusal during MDA. Participants were eligible if they were aged 18 years or older, lived in one of the selected villages/settlements and were able to provide informed consent. Key informants included health service staff working in the Central and Western Divisions and community leaders involved in the planning and/or delivery of the program. Key informants were recruited via telephone or email and were provided with a participant information sheet via email or in person. Sample size was estimated to be sufficient based on the principle of theoretical saturation and our previous experience with this methodology in similar settings.[22]

Data collection

Semi-structured discussion guides were used to explore participants' knowledge of scabies and perceptions and acceptability of MDA for scabies control. The development of these guides was informed by a socio-ecological model of health promotion to examine personal (e.g., knowledge, perception of health), interpersonal (e.g., family, community), institutional (e.g., health services) and societal (e.g., policies, cultural norms) influences on participants' perceptions of implementing or participating in the program.[23] All participants confirmed that they were comfortable to conduct the interviews in English. EM, AT and AK conducted the interviews, which lasted between 20 and 45 min and took place face-to-face, except for four key informant interviews which were conducted virtually, due to limited access and time constraints.

Data analysis

Interviews were audio-recorded and transcribed verbatim, and subsequently de-identified to protect participants' anonymity. Extensive notes were also taken during the interviews. Data were input into NVivo 12 and coded thematically using deductive and inductive techniques by EM.[21] Deductive coding was guide by the socio-ecological model of health promotion to examine individual, interpersonal and institutional level influences on participants' perceptions of the program.[23] Further inductive analysis was conducted to identify specific issues discussed by interviewees within each theme.[24] Throughout data analysis, EM discussed the identified themes and their interpretation with co-authors to facilitate verification through discussion.

Ethics

Ethical approval for this study was gained from the Fiji National Research Ethics Committee [52/2021] and the UNSW Sydney Human Research Ethics Committee [HC230331]. All participants were provided with a participant information sheet and consent form which the researchers explained to participants and responded to any questions, and which participants signed. Participation in the study was voluntary and confidential. Pseudonyms are used in reporting the data.

Role of the funding source

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Results

In total, 44 community members (27 iTaukei, 13 Indo-Fijian and 4 other Pacific Islander) participated in the study (Table 1). Ages ranged from 23 to 76 years and the majority (30/44) of participants were female. Household composition varied between 2 and 10 occupants, with more than half (30/44) living in households with greater than 5 occupants. Most reported ingesting both doses of ivermectin (34/44) during MDA. Reasons for missing the second dose include not being home at the time of drug distribution or MDA teams not returning to administer the second dose. Semi-structured interviews were also conducted with 12 key informants with various levels of involvement in the planning and delivery of the program. This included senior MHMS staff, divisional and sub divisional medical officers, executive head of provincial councils, public health team leaders, nursing managers, nurses, peer educators and nurse interns.

Characteristics	Number of participants
Age	
20–29 years old	4
30–39 years old	13
40–49 years old	4
50–59 years old	12
60 years and over	11
Ethnicity	
iTaukei	27
Indo-Fijian	13
Other	4
Sex	
Female	30
Male	14
Location	
Village	21
Peri-urban settlement	13
Urban settlement	10
Household composition	
1–4 occupants	14
5–8 occupants	26
9–10 occupants	4
MDA compliance	
1 dose	10
2 doses	34

Table 1: **Community member characteristics.**

Factors that influenced acceptance of the program are divided into: knowledge, attitude and perception; communication; and planning and delivery.

Knowledge, attitude and perception

Awareness and knowledge of scabies

Awareness and knowledge of scabies among community members was widespread, with scabies overwhelmingly perceived as an issue experienced by children. Typical responses included, "I have seen scabies in this village. It is common among children" (Mere, iTaukei, female, 35 years, village) and "It is a disease, it is itchy on the skin. You can get scars. It affects children" (Ravinesh, Indo-Fijian, male, 71 years, peri-urban settlement). Scabies causation was associated with poor personal hygiene and environmental conditions, with common responses being, "When kids play outside in the mud…that is when they get scabies" (Kelera, iTaukei, female, 33 years, village), "They [children] play in dirty areas, not clean in the areas where they live" (Divya, Indo-Fijian, Female, 36 years, peri-urban settlement), "[scabies is caused by] wearing dirty clothes" (Lilieta, iTaukei, female, 51 years, village) and "If the children visit the river, then you see sickness issues like this after the rain" (Tomasi, iTaukei, male 60 years, village). No community members identified mites as the cause of scabies.

Attitudes and perception towards MDA for scabies control

Overall, community members and key informants perceived the program positively. They believed MDA was beneficial for individuals and communities and were supportive of the program as an approach to control scabies in Fiji. For some community members, the decision to consume the medication offered was shaped by their lived experiences of scabies at a household and community level. Tomasi (iTaukei, male, 60 years, village) participated in the program because one of his family members had scabies during MDA, "At that time, we had some signs of sickness [scabies] in the family". Key informants also noted that the high prevalence of scabies in Fiji influenced community willingness to participate.

> "Generally, people were receptive because scabies was a problem in the communities, not just in children but also in adults. So, they were open to us and willing to take the tablets." (KI10)

For others, belief in the importance of prevention over treatment influenced acceptance of the program. Several community members viewed participation as an important precautionary measure, regardless of whether they had previously experienced scabies in the family. For example, Kelera (iTaukei, female, 33 years, village) shared, "My family took it for protection and prevention...so my children are safe", while Divya (Indo-Fijian, female, 36 years, peri-urban settlement) reported she participated because "It is better to prevent it before someone gets it...better we just take [the] medication".

The perceived and actual experiences of the health benefits of ingesting medication, including a reduction in itching and visible skin issues, increased acceptability of the program. Several iTaukei community members reported improvements to their own health and physical state, and a reduction in scabies in their community, especially among children following MDA. Mere (iTaukei, female, 35 years, village) shared that her son previously had scabies but "when he took the tablets there has been no [more] scabies coming from his skin", and Serona (iTaukei, female, 48 years, urban settlement) reported that after her granddaughter used permethrin cream the "scabies came out" and that she "used to be itchy all the time [but] now it has stopped". Key Informants reported that some community members who initially refused to accept the medication sought treatment after MDA on learning the health benefits of consuming the medication from others in their community, "At first some refused and after hearing from others [about the effects of the medication], then they came forward" (KI8).

Despite general community acceptance of the program, some key informants reported that fear resulting from the recent COVID vaccine campaign reduced medication acceptance in some communities.

> "We had MDA for LF [lymphatic filariasis] and that was OK but after COVID they asked: 'does it have anything to do with COVID, any side effects?' They were reluctant to participate" (KI1).

A few key informants reported religious values as impeding MDA uptake, "One barrier in our area was religious beliefs, of a certain group...[they] did not allow us to give tablets, only cream" (KI10). To address any concerns, some key informants reported spending additional time explaining the treatment regimen and potential benefits of participation. This alleviated some community members' fears and increased acceptability of the medication.

> "At first, [the] mindset of people was this is another thing coming to them like the COVID vaccine, so we had to do awareness to get them to understand this is different to COVID. This is oral treatment and cream. Proper information provided to the community allowed them to understand and then they came forward for treatment." (KI4)

Awareness creation and community sensitisation about MDA

Key informants acknowledged the importance of early and sustained community awareness and sensitisation in ensuring program participation. However, some reported community sensitisation was not carried out homogenously or in a timely manner, with certain areas and communities, especially those in urban areas, having limited exposure to community awareness campaigns.

> "Information was not given at the right time. The [MDA] campaign started and only then did we give the community information. If information had been given beforehand, then it wouldn't have been as challenging." (KI2)

Awareness of the program among community members was mixed. Some noted receiving information about the program through TV and radio advertisements, during community meetings, and via healthcare professionals, either during home visits or after visiting a health centre. Krishneel (Indo-Fijian, male, 53 years, peri-urban settlement) shared, "We have heard about it on TV and radio. They were telling us people would go door to door to give medicine". ITaukei community members residing in villages in rural areas were more likely to report learning about the program from village headmen [*Turaga ni Koro*] or community health workers.

> "Those people told our chief [village headman] and the chief told the village that they were coming. They showed us those posters and pamphlets. They were

up in the community hall before the MDA for awareness." (Jone, iTaukei, male, 31 years, village)

Others, including several participants residing in peri-urban and urban settlements, reported that they were not adequately informed about the program prior to MDA. This included a lack of information on the date and time of MDA, and only finding out about the program the day the MDA teams knocked on their door. For example, Serona (iTaukei, female, 48 years, urban settlement) shared, "They just came and told us on the day. They said that scabies is coming around Fiji it is a sickness...so good to take the medication to prevent it".

Information about the program was delivered in local languages (Bau Fijian and Fiji Hindi) and participants reported program posters and pamphlets were clear and understandable, which led to increased acceptability (Fig. 1). For instance, Rosa (iTaukei, female, 60 years, urban settlement) shared, "It is easy to understand because it is in Fiji language too, eh?" Key informants reported the educational material was particularly useful during MDA when explaining the rationale for the program and some noted the posters were so popular among community they ran low on supplies before MDA completion, "The purple poster was very useful when we went out to explain the purpose of taking medication because it is easy to understand" (KI2).

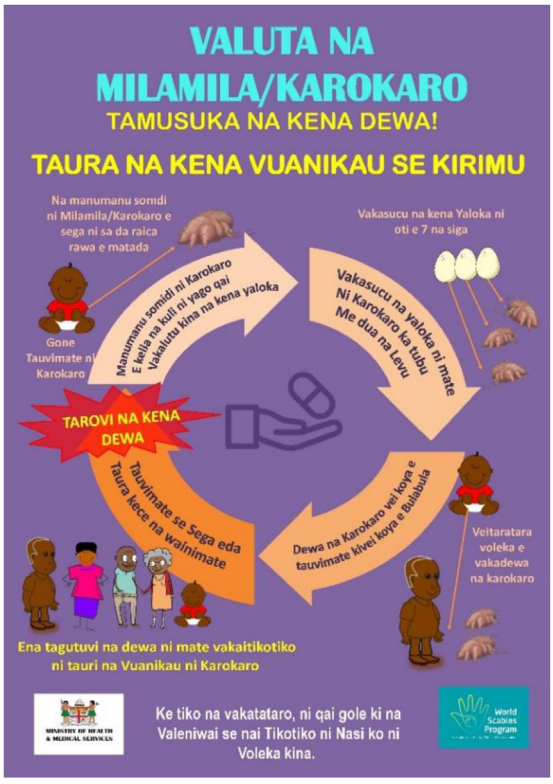

Fig. 1: Communication materials—MDA life cycle poster iTaukei version.

Key informants reported they worked closely with community health workers and peer educators to ensure messaging about the program reached their target communities, although this was often reported as only happening in the days prior to MDA, "Community health workers worked with us. They went two days before to let communities know, which was helpful" (KI1). Village headmen were also noted as instrumental in delivering community sensitisation to iTaukei communities in rural areas through organising village meetings to distribute information about scabies and the purpose of MDA.

Program planning and delivery

Program planning

Key informants involved in MDA planning indicated the crucial role microplanning played in the successful implementation of the program. Critical aspects of the planning included the microplanning workshops and regular zoom meetings with program team members to plan coverage zones, MDA teams, travel logistics, meals and subsistence allowance and mobilisation during MDA. Key informants noted that microplanning enabled MDA to be delivered in a coordinated and systematic approach, "[What worked well was] having a plan and implementing that plan accordingly. I monitored the plan each day to see what was lagging and improved each day" (KI8).

Cooperation and planning between MDA teams, community health workers and iTaukei village headmen in rural settings led to program acceptance. This coordination increased the reach of community sensitisation, community presence during MDA and acceptability of the program, "They [community health workers and *Turaga ni Koro*] told us the best time to come into the communities to distribute tablets, best day, and time. It assisted a lot" (KI10).

Training of key informants involved in the program, including *Roko Tui* [Executive Head of one of 14 Provincial Councils], village headmen, community health workers and nurses involved in MDA led to program success. Key informants involved in the training reported increased knowledge about scabies, the purpose and benefits of MDA and reported feeling confident disseminating this information to other key informants and to community members, which assisted with community sensitisation and program acceptability.

> "The topics covered [during training] were very informative and [it was] easy to share this information after the training at provincial meetings." (KI9)

> "Before MDA they [implementation team] conduct training with community health workers and *Turaga ni Koro* [village headman].... If it weren't for the training, I doubt they would have known why we had come into their communities, but by the time we

arrived to distribute the tablets they knew why we were there." (KI10)

Program delivery

Information provided during MDA was found to play an important role in program acceptability. When MDA teams took the time to adequately explain the rationale of the program and answer questions or concerns, acceptability increased. As Tomasi (iTaukei, male, 60 years, village) recalled, "All the families in the community accepted it [medication] because the doctors [health worker/nurse] explained [the rationale] well". This was especially important in settings where community sensitisation had failed to reach. When MDA teams were health workers from the local area, their reputation and authenticity of the information provided influenced acceptance of the program. Krishneel (Indo-Fijian, male, 53 years, peri-urban settlement) shared he participated because, "The doctors and nurses know very well a lot about medicines, and they are trying to protect us".

Several community members, however, reported they received inadequate information during MDA, including specifics of the medication provided and possible medication side effects. For example, Venina (iTaukei, female, 56 years, village) shared, "We did not know why they gave us tablets", while Aadhira (Indo-Fijian, male, 64 years, peri-urban settlement) said MDA teams should "sit down and explain better" recalling that when they administered the medication to his household, "They just gave us [the medication] and left. We do not have enough information on why we need to take tablets". This suggests that in some settings, adequate information was not provided prior to and during MDA.

Community leaders played an important role in program delivery in rural settings. Village headmen were critical in shaping how iTaukei communities in rural villages responded to the program and were an important bridge between health staff and communities. Their role included organising village meetings for community sensitisation, ensuring people were present in the village on the day of MDA and assisting community health workers to follow up with any absent community members. Their endorsement of the program through participation in community engagement activities and presence during MDA resulted in increased coverage and acceptability in these settings.

"In past MDAs, community has not given us permission to come, especially post COVID due to you know, the concern about the COVID vaccine, but the *Turaga ni Koro* [village headman] involvement meant community were OK with us coming" (KI10)

While key informants had an overall positive perception of the program, they reported several factors that inhibited program delivery. Absenteeism of households at the time of MDA due to work or community commitments provided challenges to coverage in some areas, particularly in urban areas such as the capital Suva, "In an urban area, everyone is always moving so it is a challenge to reach them" (KI1). Some key informants also reported difficulties in reaching certain communities due to distance, difficult terrain and lack of roads and transportation, and environmental and logistical challenges.

Staffing challenges and the short timeframe allocated for MDA were also reported as factors impacting program delivery. A lack of MDA team members, exacerbated by wider workforce shortages within the Fiji Ministry of Health at the time of MDA, was noted as negatively impacting overall MDA coverage. Staff shortages were addressed by utilising newly graduated nursing staff and volunteers to assist during MDA in some locations. The time allocated for MDA, including timing between first and second dose were also reported as insufficient, particularly in contexts where staff shortages impacted MDA teams. As a result, several key informants reported some areas were left out during MDA, with community members in some of these locations coming to their health service asking for the medication after MDA.

Discussion

This is the first in-depth qualitative study to examine acceptability of a national scabies MDA program globally. It draws on the lived experience and unique perspectives of Fijian community members and key informants involved in program. It provides important insights to optimise delivery and acceptability of future MDA programs in Fiji and the broader Asia Pacific region.

From our analysis we identified locally-situated, individual, interpersonal and institutional influences on community and key informant perceptions and acceptability of MDA for scabies control in Fiji. For example, at an individual level perception of the program was largely positive and acceptability was shaped by lived experiences of scabies in households and communities, perceived and actual experiences of the benefits of ingesting medication (such as a reduction in itching and visible skin issues), and preventing transmission.[6] However, personal or interpersonal experiences of side effects from the COVID-19 vaccine were noted by key informants as reducing medication acceptance in some settings. Interestingly, no participants referenced the widespread online discourse about the use of ivermectin for COVID-19 as affecting acceptability of the MDA.[25] Trust is essential to the success of MDA and concerns over the potential influence of COVID-19 on MDA adherence to treat NTDs has been noted elsewhere.[26] This finding highlights the importance of identifying strategies to mitigate any negative impacts of COVID-19 on future MDA programs in Fiji and elsewhere.

At an interpersonal level, perceptions and acceptability of the program were socially located within community institutions. For instance, community attitudes to the program, knowledge of neighbours' adherence practices, and learning of the health benefits of ingesting medications from other community members positively influenced acceptability, echoing results from previous studies of lymphatic filariasis MDA acceptability in India[27] and Indonesia.[28,29] Endorsement of the program by iTaukei village headmen influenced community participation in rural settings. Previous research on NTD control efforts in Nigeria has also highlighted the critical role community leaders play in influencing community response to and engagement in MDA programs.[30,31] In contrast, religious beliefs were reported by key informants as presenting challenges to program acceptance and influenced noncompliance in a few locations. These findings highlight the role that social relations and norms play in shaping individual and collective practices related to MDA adherence and acceptability.[17]

At an institutional level, community sensitisation and comprehensive community consultation were key to community understanding and acceptance of the program. In settings where community sensitisation activities reached target audiences, community consultation took place prior to MDA, and adequate information was provided during MDA, acceptability was high. The importance of community consultation and information sharing prior to and during MDA has also been noted to positively influence acceptability in India,[32] Philippines[33] and Haiti.[34] In contrast, in locations where exposure to community awareness campaigns were limited, community consultation was absent or inadequate, and insufficient information was provided during MDA, acceptability was reduced. This was found to be a particular issue in urban and peri-urban settings, with similar challenges noted in MDA programs in urban settings in the Asia–Pacific region[29,35] and globally.[36] Ensuring people are provided with adequate information prior to and during MDA so they can make informed decisions about whether or not to participate is essential. Microplanning workshops and involvement of community health workers and community leaders during planning and implementation were critical to MDA role out. Training for community leaders and drug distributors increased technical knowledge, motivation and confidence in program roles and MDA delivery. The importance of culturally tailored training of drug distribution teams for successful MDA delivery has been noted elsewhere.[32,37] Process issues identified that impeded MDA coverage and program acceptability included the absence of community members during MDA due to social or work commitments (particularly in urban settings), a lack of repeat visits for MDA, shortage of drug distributors, and time constraints around program delivery.[32,35,37,38] These findings confirm the importance of involving communities in the co-design and delivery of MDA programs in Fiji and developing targeted community sensitisation and context-specific MDA delivery strategies for unique (urban and rural) settings.[17,29,36,39] Importantly, the role of communities in MDA programs should go beyond involvement in the distribution of information or medicines to instead drawing on local knowledge and expertise from program conception.[17]

A key strength of our research was the inclusion of community members from multiple locations (urban, peri-urban and remote) across two divisions and key informants from varying levels and roles within the program, ensuring a wide range of views and experiences relating to the use of MDA for scabies control in Fiji. There are some limitations to this study. First, data collection approaches combined with logistical constraints resulted in more females and community members of retirement age taking part in community interviews. Researchers limited their recruitment to daytime, thereby missing some males who work outside the home. The sample size, purposive sample, and focus on the Central and Western Divisions for participant recruitment for our study limits its generalisability. Second, although part of this study aimed to understand community acceptability of MDA for scabies control, due to recruitment challenges we did not conduct interviews within non-compliant community members to understand their perceptions of the program. As previously stated, program staff reported that refusal for MDA was very low. Future research should include noncompliant individuals to gain a deeper understanding of reasons for medication refusal beyond the insights provided by key informants in this study.

Conclusion

Our findings provide novel insights into the diverse socio-structural factors that influenced implementation and acceptability of a world-first nationwide scabies MDA in Fiji. These insights will prove valuable in improving the design, implementation and acceptability of future MDA programs in Fiji and the broader Asia Pacific region. Findings highlight several key strategies national MDA programs may consider to maximise acceptability and uptake. These include development of targeted community sensitisation and tailored approaches to urban and rural MDA delivery, and drawing on the local expertise of communities to involve them as equal partners in the co-design and implementation of MDA programs. Research that explores challenges to urban MDA programs and identifies context-specific methods to increase MDA coverage in urban settings would also be beneficial.

Contributors

EM, AT, SL, and LR contributed to the design of the study. EM, AT, SL and AK co-ordinated the fieldwork activities and data curation

(recruitment and data collection). EM conducted data analysis and wrote the first draft of the manuscript. All authors read, edited, and approved the final version of the manuscript, and had final responsibility for the decision to submit for publication. EM, AT, AK and LR accessed and verified the data reported in the manuscript.

Author reflexivity statement

Our research team comprised academics, clinicians and technical experts from Fiji and Australia with expertise in areas including qualitative and quantitative research methodologies and methods, public health and neglected tropical diseases, and implementation science. Our work is informed by a decolonising global health perspective that recognises health inequities as driven by systemic and historical factors and calls for global health to be grounded within a health justice framework to achieve health equity. Six authors are based in Australia and five are based in Fiji. Four of the authors work at higher education institutions (Australia), with varying levels of seniority, including early and mid-career researchers and senior academics, three authors work at the Fiji Ministry of Health and Medical services as clinicians and program managers and four work for the World Scabies Program in various roles including project management and research officer.

Data sharing statement

Data cannot be made publicly available to a repository as this goes against the Institutional Review Board approval of the Fiji National Research Ethics Committee and the UNSW Sydney Human Research Ethics Committee. Relevant excerpts of the data are in the manuscript. For researchers who meet the criteria for access to confidential data, their request will be evaluated on a case-by-case basis. Data inquiries may be directed to Dr Elke Mitchell, emitchell@kirby.unsw.edu.au.

Declaration of interests

AS is Director of the World Scabies Program and the Director of the World Health Organization Collaborating Centre for the Control of Scabies. LR, JK and SL are members of the World Scabies Program Executive team. All remaining authors have no conflicts of interest to disclose

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Appendix A. Supplementary data

Supplementary data related to this article can be found at https://doi.org/10.1016/j.lanwpc.2024.101194.

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