

## Who does what and why? Examining intra-household water and sanitation decision-making and autonomy in Asutifi North, Ghana

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### ABSTRACT

While under-researched in the water, sanitation and hygiene (WASH) sector, it is increasingly clear that women's agency is fundamental to addressing inequalities in many contexts. However, focusing on agency alone can overlook the underlying reasons for decision-making behaviour. This article examines two important aspects of decision-making: motivations behind a person's actions, and the extent to which decisions are perceived to be solely or jointly made. We draw on a household survey of 600 respondents to examine decision-making related to three domains: water collection, WASH expenditures, and WASH community planning among dual adult household members in Asutifi North district, Ghana. On average, women were more likely to report no input into decision-making related to sanitation expenditure and community participation. However, women had high decision-making autonomy related to water collection and community participation compared to men. Disagreement on decision-making among partners was substantial and systematic across the three domains. These findings imply that decision-making in WASH are gendered, and better contextual understanding of the underlying gender dynamics is very important for promoting women's empowerment in WASH. These dynamics are particularly important to consider in interventions that rely on household self-supply of water or sanitation facilities.

**Key words:** autonomy, decision-making, gender, Ghana, motivation, water and sanitation

### HIGHLIGHTS

- We examine partners input in and motivation for WASH decision-making at the household level.
- Women had high decision-making autonomy related to water collection.
- Disagreement on decision-making among partners was widespread.
- Findings show importance of intra-household decision-making and power relations in WASH.

## 1. INTRODUCTION

There has been growing interest since the 1980s in promoting women's involvement and participation in the management of water and sanitation programmes, particularly due to their role as traditional water managers for their households in many countries (Ivens 2008). The Dublin principles (1992) state that 'women play a central part in the provision, management and safeguarding of water.' A number of studies of water and sanitation programmes report that women's participation is critical to their effectiveness and sustainability (GWA and UNDP 2006). However, increasing women's participation does not necessarily lead to empowerment if power relations are not addressed, and often participation may involve contributions of labour and time without control over decisions (Wijk-Sijbesma 1998). Furthermore, much of the impetus for these gender mainstreaming programmes is from an instrumental perspective, overlooking opportunities to address entrenched gender inequalities (MacArthur 2020). As participation opportunities alone are inadequate to address these challenges, there is growing interest in transformative water, sanitation, and hygiene (WASH) interventions that engage with unequal power relations and unfair social norms. These are thought to have potential for greater impact in terms of contributing to gender equality as well as sector outcomes such as behaviour change and reduction of disease burden (Leahy *et al.* 2017; Oxfam 2020). These types of WASH interventions address challenges such as harmful

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gender norms and attitudes related to water and sanitation and often seek to increase women's empowerment through meaningful participation and greater decision-making opportunities.

Compared to research on participation, there has been less research attention on the implications of WASH decision-making, particularly in the case of intra-household decision-making. However, there is growing recognition of the role household dynamics play in WASH uptake (Augsburg & Rodríguez-Lesmes 2020; Danert & Hutton 2020), and few recent studies have sought to address the role of decision-making. The recently developed Empowerment in WASH index (EWI) includes indicators on intra-household decision-making related to sanitation expenditure, community planning, and water collection as indicators of empowerment (Bisung & Dickin 2019; Dickin *et al.* 2021). Similarly, proxy measures of women's power in making decisions around major household purchases were found to be strongly linked to better sanitation outcomes in Kenya (Hirai *et al.* 2016). Routray *et al.* (2017) reported in Odisha, India, that despite an emphasis on women's involvement in sanitation programmes by government, sociocultural factors and dynamics within households and communities prevented women from participating in sanitation decision-making. These types of dynamics are particularly important to consider in the case of initiatives that focus on self-supply for household provision of WASH facilities (Sutton & Butterworth 2021).

Intra-household decision-making and resource allocation have widely been used as direct measures of women's empowerment, including regular decision-making questions in the Demographic and Health Surveys since the late 1990s (De Brauw *et al.* 2014; Bonilla *et al.* 2017). As research on empowerment and decision-making expands in the WASH context, an important question to address is the use of decision-making as an indicator of empowerment with the implicit assumption that one type of input into decision-making (either sole or joint input) is potentially more empowering than the other (Seymour & Peterman 2018). With regard to water and sanitation, there is a lack of empirical evidence to show the conditions under which having a 'say' or 'not having a say' can be regarded to be empowering.

The aforementioned uncertainties around intra-household WASH decision-making limit the relevance of quantitative measures that attempt to examine women's agency and empowerment in WASH. Understanding empowerment in WASH requires adequate examination of the motivations for decision-making in specific domains. It is also important to note that a significant body of work that focuses on intra-household decision-making has been conducted in South Asia, while there is limited work examining these dynamics in sub-Saharan Africa.

Following studies in agriculture by Seymour & Peterman (2018) and Vaz *et al.* (2016), the objective of this article is to examine patterns of autonomy in decision-making related to water collection, WASH expenditures, and WASH planning among dual adult household members in Asutifi North district, Ghana. The study also investigates the extent of sole or joint decision-making and intra-household agreement on decision-making between adult male and female primary decision-makers. A better understanding of feelings of autonomy in decision-making will give valuable insights on how each specific intra-household decision is related to empowerment, as well as on the uptake of WASH interventions. Furthermore, by examining the dynamics, motivations, and values underlying decision-making, practitioners are better able to design context-specific empowerment strategies as part of WASH interventions (Hirai *et al.* 2016).

### 1.1. Motivation and autonomy in WASH decision-making

While a focus has been on measuring decision-making itself, it is important to understand motivations behind those actions. Whether a decision is internally motivated (autonomous) or externally motivated can impact people's functioning and well-being (Deci & Ryan 2000). In the case of WASH, while men may have greater control over decision-making around water and sanitation in many settings, there are some interesting dynamics that motivate them to take decisions to acquire water and sanitation facilities. For example, some studies in India have found that men acquire household toilets to protect the privacy and dignity of newly married wives and daughters-in-law and not necessarily for their own use (Stopnitzky 2012; Coffey *et al.* 2014). While such men may take decisions to acquire latrines alone, the motivation to do so is sometimes based on cultural norms that hold men who provide latrines for their households' in high esteem. For example, under the 'No Toilet, No Bride' sanitation program in Haryana, India, men's investments in sanitation facilities were found to be partly motivated by the aspiration to improve their desirability on the marriage market (Stopnitzky 2012; Augsburg & Rodríguez-Lesmes 2020). Furthermore, some men leave water decision-making in the hands of women because social norms prescribe that women oversee water issues. In such instances, women's sole decision-making, or men's

lack of input into decision-making, is not autonomous but regulated by external force (i.e. cultural norms; [Thai & Guevara 2019](#)). This prompts the need for better understanding of the basis for participation in decision-making.

Despite the importance of these aspects to empowerment, most measures of decision-making, particularly those used in the Demographic and Health Surveys, do not examine whether women or men really value making decisions in specific areas. For example, if a woman does not value decisions related to small household purchases such as water treatment products, her choice to not participate in such decisions is autonomously motivated and can be considered empowering. If she is pressured to participate, or there is conflict, then such participation in joint decision-making cannot be considered empowering ([Donald \*et al.\* 2017](#)).

## 1.2. Sole and joint decision-making: complexities and gaps in WASH research

The concept of 'jointness' in decision-making is frequently used in health literature to reflect empowerment or gender equality. However, joint decision-making could be considered less empowering if a woman values decision-making in WASH without consulting anyone. Similarly, sole decision-making could be considered less empowering if a woman values consultation and cohesion when it comes to WASH decision-making. Indeed, sole decision-making could be a sign of an absent partner shirking the burden of decision-making ([McPeak \*et al.\* 2011](#)). Conversely, no input into decision-making could be empowering if a woman distinctly values not having a say in certain WASH issues (e.g. small everyday purchases). Moreover, a woman's preference for sole, joint, or no input into decisions could vary across different domains of WASH decision-making.

In addition, establishing 'jointness' of WASH decision-making is not a straightforward task. For example, research has found that joint decision-making could reflect consensus in decision-making or a conflict ([Njuki \*et al.\* 2014](#); [Doss & Meinzen-Dick 2015](#)). There is some early work in development scholarship to suggest that joint or no input into decision-making at the household level is mostly impacted by gender roles associated with specific tasks ([Doss & Meinzen-Dick 2015](#)). Some studies from India show that men decide on latrine acquisition and siting, while females decide on ongoing maintenance ([O'Reilly 2016](#); [Routray \*et al.\* 2017](#)). This means that gender-based norms could have an overbearing influence on patterns of decision-making.

Several studies have found disagreements among couples when asked about decision-making ([Anderson \*et al.\* 2017](#); [Seymour & Peterman 2018](#)). Thus, men and women within the same households may perceive each other's involvement in decision-making differently. For example, [Anderson \*et al.\* \(2017\)](#) found widespread disagreements in rural Tanzania when couples were asked about decision-making on a range of agricultural issues and assets. The researchers hypothesized that frequent disagreement could be expected if the benefits and cost associated with the decision is high. Among poor rural households, for example, we would expect disagreements over sanitation expenditure (private cost to the individual or household) compared to disagreement over community participation (public benefit in the short term). They also hypothesized that cash-related decisions such as sanitation expenditure or water collection (if it is a fee for service) could be difficult to monitor and agree upon by household members.

## 2. METHODS

### 2.1. Conceptual approach: measuring autonomy in decision-making

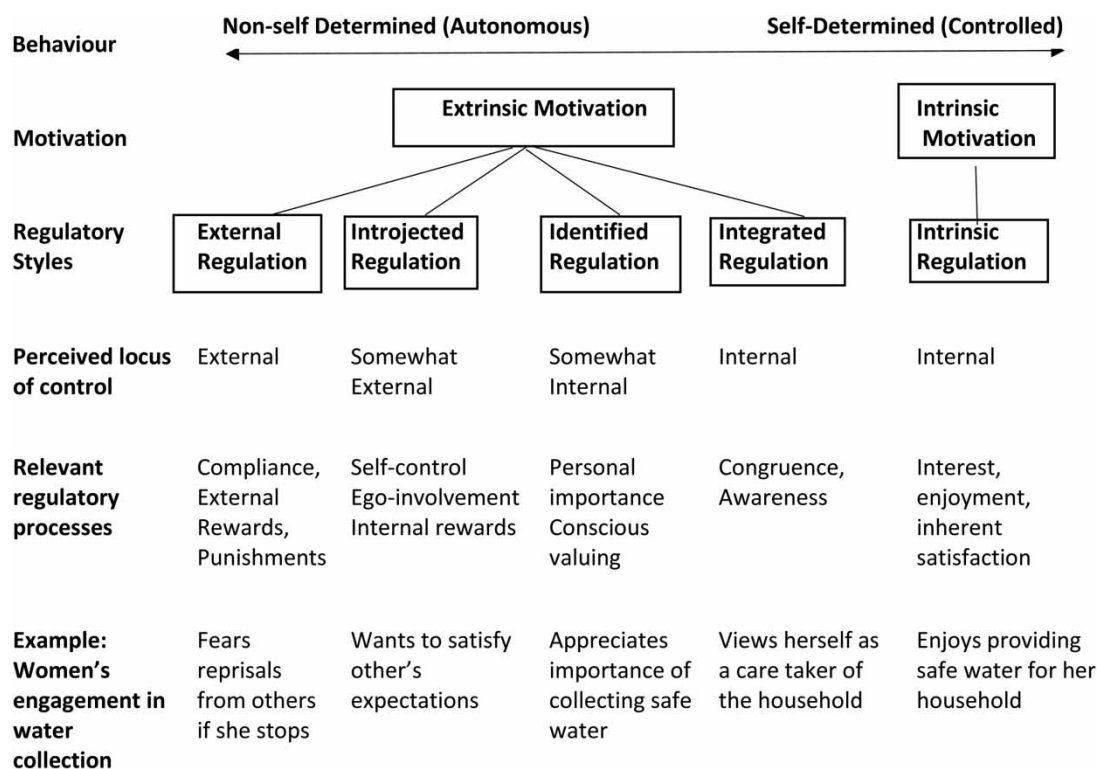
Self-determination theory (SDT) suggests that types of motivations differ based on the degree to which they are autonomously regulated ([Ryan & Deci 2000](#)). The quality of motivation is based on whether internalizing a given behaviour is 'intrinsic', such that the person develops an interest in the behaviour, willingly enacts it, and values doing it, or 'extrinsic', such that the person engages in a particular behaviour to achieve some instrumental reward. While there are qualitative differences in how types of motivation are presented in the literature, we use the SDT proposed by Ryan and Deci and adapted and applied by [Vaz \*et al.\* \(2016\)](#) in Chad and [Seymour & Peterman \(2018\)](#) in Ghana and Bangladesh. These studies suggest that extrinsic motivation is further divided into four categories: external regulation, introjected regulation, identified regulation, and integrated regulation. External motivation occurs when one's action is coerced, forced, or controlled by outside expectations. This could include not engaging in open defecation to avoid punishment or fines from a village elder. Introjected motivation occurs when actions are taken because of other's expectation. These actions may be taken to please others or enhance one's own ego or avoid public shame, such as not engaging in open defecation because one's sense of pride or ego is reduced if seen. Identified motivation may involve actions that are consciously self-recognized and valued as important, such as engaging in regular handwashing to avoid sickness. Integrated

motivation is the most autonomous type of extrinsic motivation and reflects extrinsic motivations that have been integrated into a person’s values, beliefs, and self-image.

The five motivation types are often placed in a continuum based on relative autonomy (Figure 1). Intrinsic, integrated, and identified motivations constitute relatively autonomous relations, while external and introjected motivations constitute externally regulated motivations. The Relative Autonomy Index (RAI) is a tool that takes this continuum into consideration and measures the extent to which a person’s motivation in a specific domain of activity (e.g. water collection) is autonomously influenced or externally controlled (Ryan & Deci 2000; Seymour & Peterman 2018). In this study, the RAI is measured across three domains: water collection, sanitation expenditure, and community participation in WASH-related activities. Using three different domains allowed us to examine variations in levels of autonomy across different aspects of WASH activities for men and women. Some weaknesses of the RAI have been discussed in previous studies (see Vaz et al. 2016; Seymour & Peterman 2018). For example, a person’s values and motivations may be influenced by structural circumstances that make it inconceivable to think of, or prefer, autonomy in decision-making. In the case of water collection, where there are no apparent alternative sources of water, water collection outside the household’s premises might look intrinsically motivated for most women. According to Nussbaum (2000) circumstances of extreme deprivation or oppression can cause individuals to express preference for something which ought not to be preferred under normal circumstances (i.e. adaptive preferences).

### 2.2. Context

This study took place in the Asutifi North District of Ghana, located in the middle belt of the country. The district has a population of 62,816, with the majority of residents engaged in agriculture (Asutifi North District 2014). The district is predominantly rural; however, a recent increase in mining activities has led to a growing service sector and development of urban centres. Despite recent progress in access to water and sanitation in Ghana, including achievement of the Millennium Development Goals (MDG) target on water, many in the district live without safely managed drinking water and sanitation. A significant number (41%) of rural residents in the district rely on communal boreholes for water. However, 61% of residents who use these communal facilities are not able to make a round trip of water collection within 30 min (Asutifi North District Assembly 2018). Women’s



**Figure 1** | Self-determination continuum. Source: Seymour & Peterman (2018), and adapted from Vaz et al. (2016), Ryan & Deci (2000).

autonomy and decision-making power in many domains such as water and agriculture remains low. For example, a recent study in Ghana in the agriculture sector shows that women are more likely than men to report having no input into decision-making and are less likely to report sole decision-making, particularly in relation to agricultural production, purchase of inputs, and crop choice (Seymour & Peterman 2018). Sanitation coverage in the district is a major challenge, with 50.5% having access to shared public facilities and 5% practicing open defecation (Asutifi North District Assembly 2018).

Recent interventions in the WASH sector include the construction of mechanized small town water systems. The district has initiated projects toward achieving universal access to water and sanitation as set out in the District WASH masterplan. Projects and programs in the master plan are well supported by a network of partners including traditional authorities, the District Assembly, the private sectors including mining companies, and civil society organizations (Asutifi North District Assembly 2018). The master plan also recognizes gender inclusion as a major gap and sets out initiatives to promote community engagements to ensure adequate participation of both men and women in WASH decision-making. We believe that these initiatives and programs had minimal to no impact on the results of this study because most programs were in their early phase of implementation during our data collection.

### 2.3. Data collection

Data for this study were collected as part of household data collection for developing the EWI (Dickin *et al.* 2021). The EWI is a survey-based tool developed to measure, monitor, and carry out diagnostics of empowerment in WASH-related interventions. The survey was conducted in June 2018 and administered to primary male and female decision-makers in 300 households. These primary decision-makers could be a husband and wife or other household members such as adult children or grandparents. Twenty communities were selected using a probability proportional to population size methodology. The data were collected in rural and peri-urban communities in the district, so two communities in the district with more than 5,000 residents were excluded from the sampling. About 15 households were surveyed in each community. The survey team visited each household in pairs (i.e. one male and one female). The interviews were conducted individually for the male and female respondent, and surveyors recorded the presence of other household members (e.g. presence of children) where applicable. Data were collected with mobile tablets with Qualtrics Software and uploaded daily for verification by a research associate. Ethical review and approval were provided by the General Research Ethics Board of Queen's University at Kingston.

The survey included RAI questions on water collection, sanitation expenditure, and community participation. For each domain and motivation type, we presented a short story in the form of a vignette that illustrates individual behaviours and asked respondents to rate (on a Likert scale ranging from 'completely the same' – 1, 'somewhat the same' – 2, 'somewhat different' – 3, and 'completely different' – 4) the extent to which they are most likely to behave in the same way as the person in the storyline. The questions were adapted from the SDT Self-Regulation questions in the Women's Empowerment in Agricultural Index (WEAI) questionnaire (Alkire *et al.* 2013), and the vignettes were adapted to match the gender of the respondent (Ama, women; Kofi, men). Examples of water collection domain-specific questions are follows:

*'Ama/Kofi collects water because her/his spouse or another person or group in the community tells her/him that he/she must. She/he does what they tell her/him to do – Are you like Ama/Kofi? (External)*

*Ama/Kofi collects water because her/his family or community expect it. She/he wants them to approve of her as a good member – Are you like Ama/Kofi? (Introjected)*

*Ama/Kofi chooses to collect water because she/he thinks it is best for her family and business. If she/he changed her/his mind about who should collect water, she/he could act differently – Are you like Ama/Kofi? (Identified, integrated, intrinsic)*

Questions for the other two domains are provided as supplementary material. The questionnaire also included information on decision-making in those three domains. Each primary respondent was asked the following question: *When decisions are made regarding [domain], who is it that normally takes the decision?* Response options included: (1) self, (2) spouse, (3) other household member, (4) other nonhousehold member, and (5) not applicable. Participants were asked to choose all applicable options. To facilitate analysis, responses were recoded

into (1) sole decision-making, for participants who chose only self, (2) joint decision-making, for respondents who chose self and any of the other response options, and (3) no input into decision-making, for respondents who did not select self. Respondents who selected not applicable were dropped from the analysis.

## 2.4. Analysis

The RAI score for each individual was calculated by summing a weighted score for the three questions in each specific domain. This was done based on similar studies conducted in Bangladesh and Ghana (Seymour & Peterman 2018). The weighting structure of the RAI is as follows:  $-2$  for external motivation (question 1),  $-1$  for introjected motivation (question 2), and  $+3$  for autonomous motivations (question 3). The weights also reflect the relative position of each motivation type on the SDT continuum. The RAI score for each domain ranges from  $-9$  to  $9$ . Positive scores are interpreted as reflecting relatively autonomous motivation, and negative scores indicate relatively controlled motivation.

Given that concordance on decision-making involvement among household members could reflect cooperative behaviour or power dynamics within households, we assess whether there was a high level of agreement between men and women (i.e. a clear understanding of each other's level of involvement). We created a new variable on agreement for each domain within six categories: (1) agreement on sole input, where one partner reports sole decision-making and the other partner within the household reports no input; (2) agreement on joint input, where both partners within the household report joint input; (3) agreement on no input, where one partner reports no input and the other partner within the household reports sole input; (4) disagreement on sole input, where one partner reports sole and the other partner within the household also reports sole input or joint input; (5) disagreement on joint input, where one partner reports joint input and the other partner within the household reports sole or no input; and (6) disagreement on no input, where one partner reports no input and the other partner within the household also reports no input or joint input. We used STATA v15 for the data analysis.

We assessed validity and reliability of the RAI following approaches used by Vaz *et al.* (2016) and Seymour & Peterman (2018). We first assessed validity of the RAI using exploratory factor analysis with varimax rotation to test whether the structure of the data can be explained by the latent characteristics of the RAI dimensions (i.e. external, introjected, and autonomous motivations). We retained all factors with eigenvalues greater than 1 and used minimum factor loadings of 0.4 to assign factors. We also used Cronbach's alpha to test the reliability of the motivation subscales. Finally, we used Spearman's correlation matrices to assess whether there was an ordered correlation among the dimensions of the RAI. That is, whether adjacent dimensions are more correlated than dimensions further away. For example, we hypothesize that correlation between autonomous and introjected motivation would be higher than correlation between autonomous and external motivations. Results from the reliability and validity analyses are available in the supplementary material.

## 3. RESULTS

Characteristics of the study participants and households are presented in Table 1. Most households used other improved water sources (i.e. piped water outside premises, boreholes, protected wells etc.) and limited sanitation services (i.e. flush toilet or pit latrine with lab or ventilated improved pit that is shared with other households). More women (66%) in the sample could read and write compared to men. Most of the participants were in monogamous marriages and employed. Of those employed, 76% were engaged in agricultural activities.

Table 2 and Figure 2(a)–2(c) show decision-making for men and women across three domains. More women (37%) reported making sole decisions in water collection compared to men (23%). Conversely, more men reported making sole decisions regarding sanitation expenditure (40%) and community participation (32%) compared to women (8% – sanitation expenditure and 5% – community participation). Overall, men were more likely to report sole decision-making across the three domains. The biggest gender gap in no input into decision-making was reported in the sanitation expenditure domain, where more women (69%) report no input compared to men (21%). The narrowest gender gap was reported in joint decision-making in community participation. All the RAI scores were positive, which means that behaviours across all the domains were generally motivated by personal values and interests rather than external forces. The RAI scores ranged from 1.8 to 3.2 for women and from 1.5 to 2.4 for men. The highest RAI scores were found in women's water collection and men's sanitation expenditure.

Figure 3 shows partners' agreement on who normally makes decisions in each of the domains. We included households with valid decision-making responses for each domain. Overall, agreement between men and women was relatively low across the three domains, with the highest agreement recorded in community

**Table 1** | Participant characteristics by gender

		Women (%)	Men (%)
Employed		275 (92)	293 (98)
Marital status			
	Single	6 (2)	28 (9)
	Monogamous marriage/partnership	217 (72)	267 (89)
	Polygamous marriage	59 (20)	3 (1)
	Separated/widowed	18 (6)	29 (1)
Ability to read and/or write		197 (66)	88 (29)
Mean age		42	48
Mean years lived		25	22
<b>Household characteristics</b>			
Water source			
	Improved-piped on premises	4%	
	Other improved	88%	
	Unimproved	8%	
Sanitation type			
	Safely managed	2%	
	Basic	12%	
	Limited	61%	
	Unimproved	20%	
	Open defecation	5%	

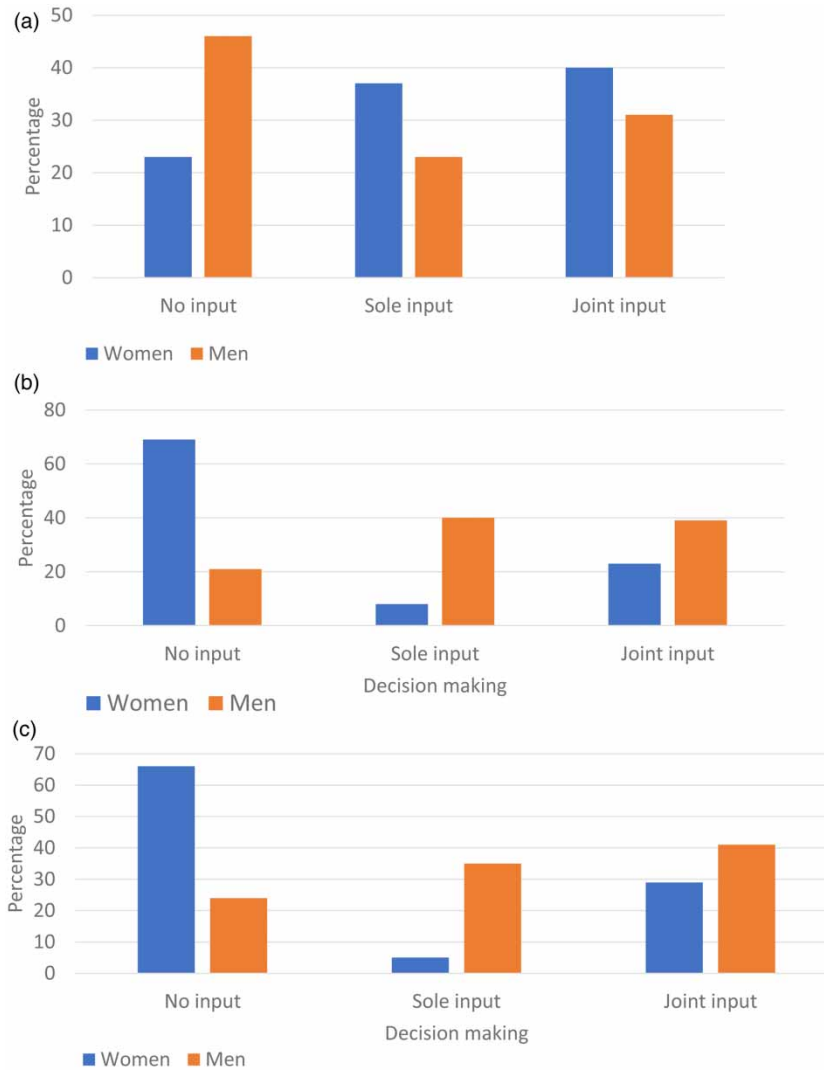
**Table 2** | Decision-making outcomes and Relative Autonomy Index scores by gender

Domain	Women			Men			Mean RAI		Total responses	
	No input	Sole input	Joint input	No input	Sole input	Joint input	Women	Men	Women	Men
Water collection	70	110	120	139	68	93	3.26	1.95	300	300
Sanitation expenditure	202	25	67	62	119	115	1.66	2.44	294	296
Community participation	196	15	88	64	95	110	1.84	1.56	299	269

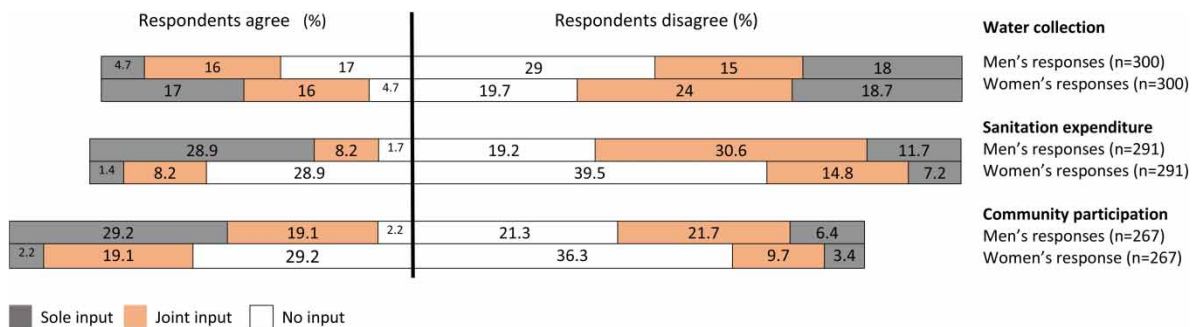
participation. The most frequent agreements within the subscales were found in sole decision-making related to community participation. The most frequent category of disagreement was found in no input into decision-making among women in sanitation expenditure. Thus, many women felt that they did not make input into decisions about sanitation expenditure, but the men felt otherwise. Results from the exploratory factor reliability analyses are shown in the supplementary material.

#### 4. DISCUSSION

This article examines two poorly understood aspects of water- and sanitation-related decision-making: the extent of sole and joint decision-making, and the motivations driving these decisions. This study is among the few to collect information on water-related decision-making among men and women within the same household and provides foundational methodological and conceptual ideas for research in intra-household decision-making in WASH. We take a detailed approach to decision-making by examining motivations and decision-making across three domains that capture key activities at the household (e.g. water collection and sanitation expenditure) and community (participation in community planning) levels. The three domains also cut across



**Figure 2** | (a) Input into decision-making related to water collection, (b) input into decision-making related to sanitation expenditure, and (c) input into decision-making related to participation.



**Figure 3** | Decision-making outcomes by domain according to percentage of men and women in the same household who agree or disagree on who normally takes decisions. Percentages are relative to the total number of households with responses from both partners.

traditionally female-dominated activities (e.g. water collection) and male-dominated activities (e.g. community planning) in the study site, which is important for holistically capturing empowerment outcomes (Seymour & Peterman 2018). The proceeding paragraphs discuss implications of the findings for transformative WASH



interventions and sex-disaggregated data collection and analysis. We also discuss some methodological contributions of this article and limitations of the study design and results.

We found that disagreement on decision-making among partners was substantial and systematic across the three domains. This is important as research on women's and children's health and education shows that well-being outcomes for women and children are best when the woman's power is recognized by her husband (i.e. agreement in decision-making; [Annan et al. 2020](#)). More men reported sole decision-making, and disagreements commonly occurred when women claimed that they did not take part in sanitation expenditure decision-making, but the male primary decision-maker in the household reported otherwise. These findings have implications for interventions such as Community Led Total Sanitation as well as any WASH interventions traditionally targeted to women due to gender roles, while overlooking how men's decisions may influence outcomes.

As noted by [Vaz et al. \(2016\)](#), substantial disagreement among partners calls into question surveys that seek the perspective of only men or women on decision-making and bargaining power. For example, the 2014 Ghana DHS data reveal that 24, 21, and 62% of women made sole decisions relating to their healthcare needs, large household purchases, and how to spend their own earnings, respectively ([GSS GHS and ICF International 2015](#)). While women's responses on these subjects (health, household purchase, and household spending) are extremely important, we would achieve robust information and understand household dynamics better if such responses are complemented with men's perspectives on the same issues. In the case study presented here, the positive mean RAIs indicate that both men and women were likely to be intrinsically motivated, though at varying levels, to take part in water and sanitation decision-making at the household level. However, understanding the motivation dynamics across the various domains will require extensive ethnographic studies.

The lack of sex-disaggregated data in many settings has made empirical articulation of gender inequalities at the household level a difficult task ([Sinharoy & Caruso 2019](#)). As noted in a previous study (e.g. [Anderson et al. 2017](#)), asking both women and men to independently respond to decision-making questions involves significant financial cost, time, and complexity in data collection and analysis. This has often led to the collection of single-partner responses that do not adequately reflect household responses. In this case study, the lack of shared understanding of partners' level of involvement in decision-making across the three domain means that partners' views of each other's involvement is not static across different activities. Aside from demonstrating the importance of dual-partner surveys for understanding intra-household decision-making, the findings suggest that emphasizing women's bargaining or decision-making power at the household level may have different trade-offs and pay-offs depending on how women value allocation of decision-making power to other household members (i.e. particularly male primary decision-makers in the case of this study). For example, women who value sole decision-making in water collection, partly because they shoulder most of the burden, may feel less autonomous if WASH interventions promote strong consensus building in decision-making among partners. In addition, though there are prevailing assumptions that men are mostly 'in charge' of household decision-making in male-dominated societies such as Ghana, agreement on joint decision-making was relatively common in this study, particularly for water collection and community participation. This means that assumptions about 'who makes decisions' need to be juxtaposed with careful analysis of household dynamics around labour contributions, cash contributions, and cultural norms around each household activity. Indeed, the 2014 Ghana DHS Survey, which collected responses from women, shows that joint decision-making was very common in three domains: large household purchases (52%), women's health care (52%), and visits to relatives (62%; [GSS GHS and ICF International 2015](#)).

There are some methodological limitations worth flagging. While we did not find or seek to find evidence of adaptive preference among women in our sample, an in-depth understanding of the circumstances and social constraints in which women live is important for interpreting our results, such as those related to overall positive RAI scores. In addition, there are arguments that treating SDT as a continuum structure dilutes the richness of different internalization processes. Also, the study uses responses of only male and female decision-makers within households. This leaves out many other adult household members who might have made 'secondary' inputs to the decision. Thus, generalization of the findings to the entire household must be made with caution. Finally, the lack of shared understanding of input into decision-making between men and women might be due to differences in how they interpret the questions. For example, men and women may have different understandings of what it means to make input into decisions about sanitation.

Despite the limitations identified earlier, we believe that the evidence in this article including the gender gaps in household input into decision-making and relative autonomy, and widespread disagreements on levels of input

among partners, are important for WASH programming and policy making. Such evidence draws attention to the need for evidence-based tools that account for the complex relationships between women's motivations and participation in decisions. Practitioners can use such tools to design empowerment programs at the household and community levels.

## 5. CONCLUSION

This article illustrates the importance of moving beyond simplistic assumptions about the ways women negotiate access and participate in water and sanitation activities. A better understanding of how and why both women and men participate in water and sanitation activities, and how this influences the uptake and use of safe services, is needed partly because household investment in water and sanitation is increasingly recognized (Danert & Hutton 2020). In addition, research on intra-household WASH decision-making and women's motivations for engaging in WASH decision-making provides possibilities for designing empowerment tools and programs that tackle context-specific drivers of gender inequalities in the WASH sector. Understanding the extent to which gender relations influence decision-making and participation in WASH-related activities is important for both local policy making and programming, particularly those that involve interventions that seek to address uneven burden of work related to water collection. For practitioners who implement or evaluate WASH empowerment programs, the results in this study, particularly those related to disagreements among partners, offer important lessons on the need for intra-household data when conducting program evaluation.

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## DATA AVAILABILITY STATEMENT

Data cannot be made publicly available; readers should contact the corresponding author for details.

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