

FEATURE

Social Identities, Intersectionality, and the Experiences of Women and Women of Color in Marine, Aquatic, and Fisheries Science Professions

Brittany D. King | Oregon State University, 1500 SW Jefferson Way Corvallis, OR, 97331.
E-mail: brittany.king@noaa.gov

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In many STEM fields, women are considered an underrepresented social group and have been the subject of research and initiatives focused on increasing their representation. However, research suggests that focusing solely on numerical representations of a single measure of diversity often ignores how the combination of identities influence experiences. This study investigates how women and women of color perceive that their social identities (gender, race, and/or ethnicity) influence their experiences in marine, aquatic, and fisheries science-related careers. Findings revealed positive experiences connected to social identities, including examples of feelings of belonging and positive evaluations of members of their in-groups. However, findings also highlighted negative experiences resulting from social identities and instances of out-group discrimination and bias. While all participants in this study identified as women, findings revealed differences in experiences across racial and ethnic groups, highlighting the importance of exploring diversity and experiences through an intersectionality framework.

INTRODUCTION

Diversity and inclusion initiatives within organizations, institutions, and professions have presented a way to acknowledge that, historically, not everyone has had the same access or experiences in educational or professional settings. However, a pitfall of diversity initiatives is that they often focus on getting people in the room, without fully acknowledging the experiences that may deter individuals from staying there, such as experiences with discrimination and biases (Puritty et al. 2017). Efforts to promote an inclusive culture and professional environment require an examination of areas of potential bias and discrimination, followed by a willingness to make the appropriate changes to reduce these biases (Ferdman and Deane 2013; Puritty et al. 2017). While biases exist explicitly and implicitly, awareness of potential biases and the willingness to address them can reduce the chances of those biases manifesting and influencing the experiences of others (Dasgupta 2004).

In many STEM fields, women are considered an underrepresented social group (Beede et al. 2011; National Science Board 2020) and have been the subject of research and initiatives focused on increasing their representation (Jackson et al. 2014; Stewart et al. 2016). While gender is often used as a signifier of diversity (Hon et al. 1999; Banks 2009; Lee Baker et al. 2016), focusing on a single measure of diversity, and solely on numerical representations, often ignores the heterogeneity within these socially constructed groups (Tatli and Özbilgin 2012; Dennissen et al. 2020). Studies have found that the experiences of women of color in STEM can go unnoticed when grouped into the larger social categories of gender, race or ethnicity (Malcom et al. 1976; Ong et al. 2011; Wilkins-Yel et al. 2019). Therefore, multiple researchers have proposed the use of an intersectionality approach to explore diversity in organizations and STEM fields (Rodriguez et al. 2016; Wilkins-Yel et al. 2019; Núñez et al. 2020). This study draws on theoretical frameworks of social identity and intersectionality to explore the experiences of women and women of color in marine, aquatic, and fisheries sciences professions.

Social identity theory suggests that individuals categorize themselves as belonging to social groups and that knowing that they belong to these groups holds significance and value (Tajfel and Turner 1978; Tajfel et al. 1979). According to social identity theory, the categorization of individuals into socially constructed groups, paired with the recognition of group membership, has the potential to influence group member's behaviors and beliefs (Tajfel and Turner 1978; Tajfel et al. 1979). As a result, individuals mentally create in-groups (groups an individual feels they belong to) and out-groups (groups an individual does not feel they belong to) and are constantly categorizing and evaluating themselves as they relate to their in-groups and out-groups (Tajfel et al. 1979).

A consequence of social comparison is the potential for in-group favoritism and out-group discrimination (Tajfel

et al. 1979; Abrams and Hogg 1988). Literature suggests that a person's desire to see their in-group in a positive light may result in favoritism towards their in-group and bias and discrimination towards their out-groups (Tajfel et al. 1979; Abrams and Hogg 1988; Dasgupta 2004). Research on implicit in-group favoritism found that when group membership is salient, members of advantaged (represented) groups typically exhibit more implicit in-group favoritism and more bias against out-groups compared to members of disadvantaged groups (underrepresented; Dasgupta 2004). As a result, biases held by members of advantaged groups are more likely to negatively impact the lives of disadvantaged out-groups, whereas biases held by disadvantaged group members were less likely to have the same impact on the advantaged group (Dasgupta 2004).

An intersectionality framework acknowledges that looking at an issue from a single identity lens has the potential to hide the experiences of individuals who are discriminated against as a result of a combination of intersecting identities, such as race, gender, and class (Crenshaw 1989). Depending on the situation, individuals can simultaneously hold both marginalized and privileged identities (Crenshaw 1989; Núñez et al. 2020). Scientific institutions are not immune to these social processes and social relations. Within institutions of science exist underlying systems built on cultural and behavioral norms that have been characterized by white, masculine values that include implicit and explicit biases against other group values (Carlone and Johnson 2007; Byars-Winston and Rogers 2019; Davies et al. 2021). These cultural norms within science fields create systems of power that allow for the perpetuation of discrimination while requiring individuals from underrepresented groups to navigate their sense of belonging within the system (Byars-Winston and Rogers 2019; Davies et al. 2021).

From a social identity and intersectionality lens, when pursuing a career in a traditionally white and male-dominated field, the social experiences of women may result from both internal and external in-group and out-group comparison. For example, a white woman's experiences may result from in-group comparison when racial identity is salient and or out-group comparison when gender identity is salient. Whereas a woman of color's experience may result from out-group comparison when racial identity and or gender identity is salient, making their experience different even from those that they share a social identity category. This reflects the "double bind" that is often experienced by women of color in science (Malcom et al. 1976; Ong et al. 2011).

The Current Study

This study contributes to the literature on diversity by exploring the subjective experiences of women across career levels and racial identity groups. An examination of the experiences of women and women of color in marine, aquatic,

and fisheries science professions places a focus on groups with marginalized identities, the intersection of these identities, and how these identities affect how one navigates professional experiences. Anthias (2013) proposed four societal arenas of investigation for understanding intersectionality and social relations: organizational (e.g., how groups are organized with an institution framework), representational (e.g., depictions of a profession or role models in the profession), intersubjective (e.g., interpersonal interactions with others), and experiential (e.g., narratives of how individuals make sense of their abilities). Each societal arena provides a different scale of analysis, while also representing inter-related aspects of social relations (Anthias 2013), therefore providing a context through which a social identity and intersectionality lens can be used to explore experiences within fields of marine, aquatic, and fisheries science. Utilizing these societal arenas of social relations, this study investigated the following research question: How do women and women of color perceive that their social identities (gender, race, and or ethnicity) influence their experiences in marine, aquatic, and fisheries science-related careers?

METHODS

Recruitment and Participants

Recruitment and interviewing took place from February 2019 through July 2020, at annual scientific conferences, including meetings hosted by the American Fisheries Society, Society for Freshwater Science, Association for the Science of Limnology and Oceanography, Society for Advancement of Chicanos/Hispanics and Native Americans in Science, and Coastal and Estuarine Research Federation. Separate from conference settings, interviews were also conducted with students and professionals from National Oceanic and Atmospheric Association Sea Grant and Educational Partnership with Minority-Serving Institutions sponsored programs.

A nonprobability snowball sampling approach, in which research participants and key contacts are asked to assist in identifying other potential participants, was used to ensure recruitment included individuals across racial and ethnic social identities (Bernard 2013). Before each meeting, individuals connected with diversity and inclusion initiatives were identified and asked participants in the study and to assist with identifying potential participants by sharing the recruitment notice with others in their networks. An institutional review board-approved recruitment notice provided participants with the option to opt-in to the study via a short online survey that collected demographic information, including race/ethnicity, gender, and career level. Finally, opt-in participants were contacted before or during the conference to schedule in-person interviews. Additional recruitment occurred via snowball sampling outside of conferences. Two interviews were conducted online during the COVID-19 pandemic via Zoom and Google Meet, bringing the total to 34 interviews.

All participants self-identified as individuals pursuing careers related to marine and or fisheries science fields. Participants also self-identified their career level (undergraduate student, graduate student, professional), gender, and race/ethnicity. Multiple participants identified as more than one racial/ethnic group, resulting in participants from the following racial/ethnic categories: Black/African American, Latino/Latina, Multi-racial, Asian/Asian American, and White.

Procedure and Measures

This study involved in-depth semi-structured interviews, with the average interview lasting around 40 min. During each interview, participants provided responses to a series of open-ended questions about their career decisions and experiences pursuing careers related to marine, aquatic, and or fisheries sciences. Participants were asked to describe both positive and negative experiences and about connections between experiences and their social identities. All interviews were recorded and transcribed to text files. During the review of each interview file, all direct identifying information was removed to comply with institutional review board requirements.

Data Analysis

Interview data were analyzed using NVivo, a qualitative data analysis software program. The first step of analysis involved creating codes, which are “tags or labels for assigning units of meaning to the descriptive or inferential information compiled during a study” (Miles and Huberman 1994) to assign to the data. Structural coding methods, in which codes are developed based on the research question or topic (DeCuir-Gunby et al. 2011) were used (Figure 1). An overarching code “Experiences” was created for the research question: How do women and women of color perceive that their social identities (race/ethnicity and gender) influence their experiences in marine and fisheries science-related professions? Within the experiences code, were three subcodes: gender, intersectional identities, and race/ethnicity. Each of these codes were further divided into positive and negative experiences subcodes.

To operationalize the codes, I created a codebook containing the names, descriptions, and examples of text for each code (DeCuir-Gunby et al. 2011; Figure 1). The codebook was then shared with an additional reviewer who provided feedback on the codes and coding examples. Next, I coded each interview by applying codes to appropriate text. After the initial rounds for coding, coded text was further analyzed using axial coding, which is a process of organizing codes and drawing connections, then themes were identified (DeCuir-Gunby et al. 2011; Corbin and Strauss 2014; Figure 1). An additional reviewer also provided feedback on the connections and themes.

Positionality Statement

This study utilizes my experience as a social scientist with training in qualitative research methods and data analysis. That being said, how researchers perceive the social world often reflects their position within it, which can impact the way that they approach and interpret their research (Jacobson and Mustafa 2019). I identify as a Black/African American woman early career fisheries social scientist, who, similar to the participants in this study, has had both positive and negative experiences in marine, aquatic, and fisheries science settings. I acknowledge that while my personal experiences are not directly included in the data presented in this study, they did have an impact on this study, in that they influenced the research topic, questions, and interactions with the participants. In line with social identity theory, as a woman, a person of color, and a scientist, it is possible that some of the participants viewed me as a part of their in-group, resulting in a willingness to share experiences that they may have not been willing to share with researchers presenting other social identities.

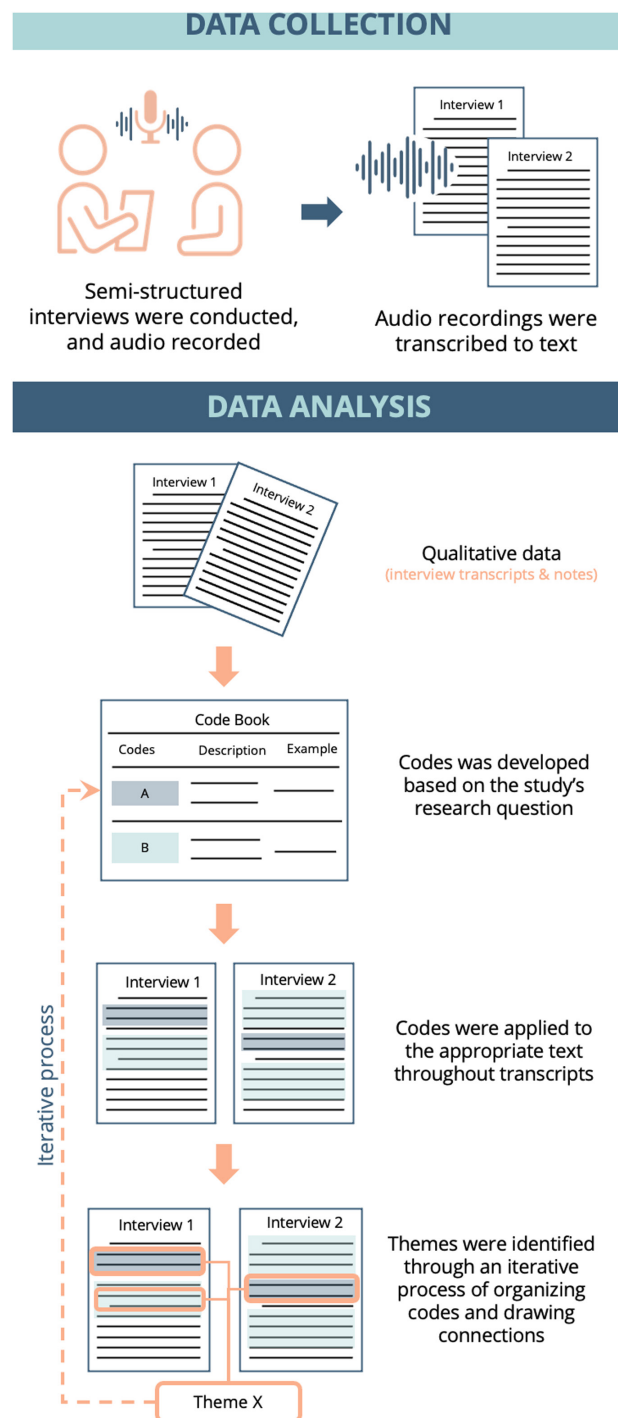


Figure 1. Illustration of the data collections and data analysis process.

RESULTS

The study's 34 participants identified as the following racial/ethnic social identity groups: Black (32%), Latina (18%), multi-racial (24%), White (24%), Asian (2%). All participants self-identified as women during data collection. All participants identified as one of following three career levels: professional (24%), graduate student (47%), or undergraduate student (29%).

Experiences in Marine, Aquatic, and Fisheries Sciences

The following results are organized using the four societal arenas of social relations (organizational, representational, intersubjective, experiential). Each societal arena is briefly introduced followed by themes that fall within that arena.

Organizational

The organization of groups within marine, aquatic, and fisheries science organizations, institutions or professions positively and negatively impacted the experiences of women and women of color. Within the broader organizational arena, diversity and inclusion initiatives were identified as a key theme related to the experiences of participants in this study.

Diversity and Inclusion Initiatives. Many participants mentioned that their social identities provided them access to diversity and inclusion initiatives. Participants saw diversity and inclusion initiatives as examples of positive experiences resulting from their social identities that contributed to building in-group relationships with other scientists with shared social identities (Figure 2, quote 1). However, some participants highlighted the effects of diversity inclusion initiatives that negatively impacted participant's experiences by reminding them that they are a part of the out-group (Figure 2, quote 2).

Participants expressed concerns about tokenism, for example being expected to represent their entire gender or race, and feeling a heightened sense of imposter syndrome, which resulted in them questioning their ability and belongingness. One participant provided examples of their experiences at a primarily white institution in which their department provided scholarships to students from underrepresented backgrounds and how that impacted their experiences (Figure 2, quote 3).

Finally, one participant expressed concerns about how diversity is perceived in marine, aquatic, and fisheries sciences, compared to STEM fields, and how it can lead to feelings of exclusion. An Asian American participant highlighted how she is often told that Asian Americans are overrepresented in STEM. Yet, she rarely sees people that look like her in her field. This resulted in an in-group-out-group comparison and feelings of not belonging, which is sometimes supported by diversity and inclusion narratives. She provided an example of a colleague not considering another Asian American woman as representing diversity when reviewing applications for a diversity program (Figure 2, quote 4).

Representational

The ability to see oneself within an organization, institution, or profession either facilitated or deterred feelings of belongingness and decisions to pursue a career in marine, aquatic, and fisheries science professions. The representational arena focuses on the depictions of a profession in general, which presents itself in various ways, including role models in the profession. Three themes were identified within the representational arena: mentorship and support; marginalized, but privileged; and possible selves.

Mentorship and Support. Participants discussed situations in which it appeared that the salience of their identities resulted in positive experiences in the form of establishing mentorships and support systems with individuals with shared identities. While positive experiences with male mentors were mentioned, there were many instances where participants called out the importance of gender and their experiences with other

DIVERSITY AND INCLUSION INITIATIVES

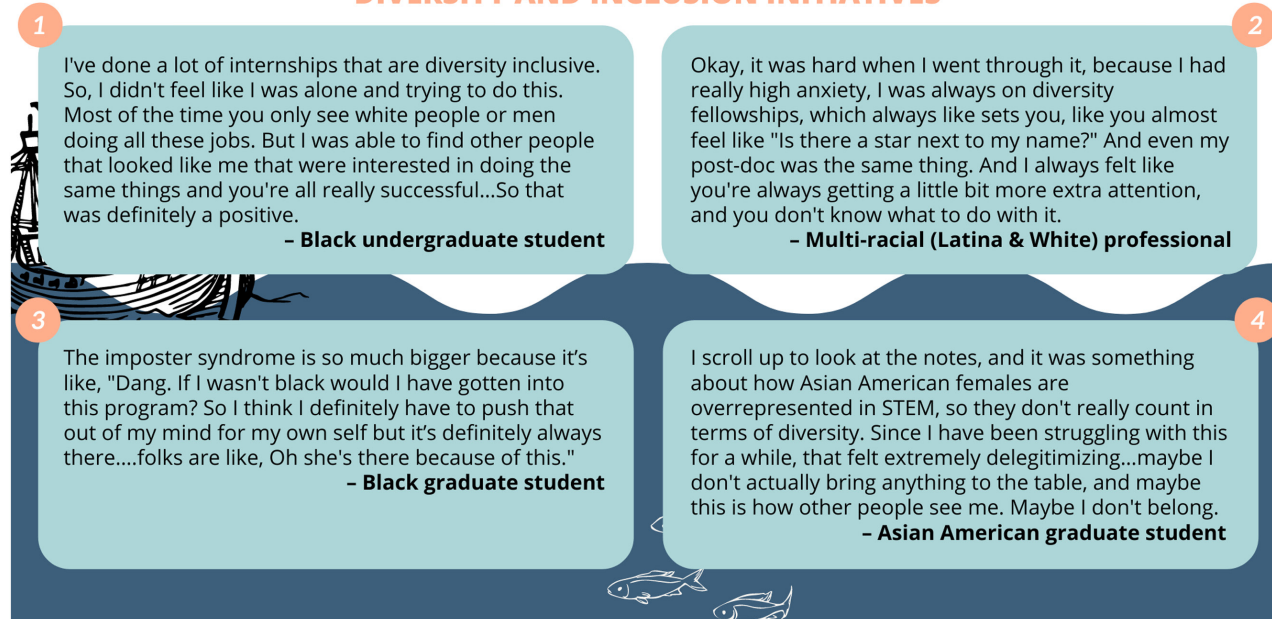


Figure 2. Participant quotes represent the diversity and inclusion initiative's theme.

women. This was commonly seen when discussing how other women in the field, as formal and informal mentors, have helped them along their career journey (Figure 3, quote 1).

However, simply sharing a gender identity did not always result in positive in-group experiences, especially in situations that caused other social identities to become more salient. For example, one participant discussed how they felt their experiences with English as a second language influenced their experiences with their graduate advisor, someone they previously assumed was a part of their support system. They discussed a negative experience involving their advisor while reviewing an important grant application (Figure 3, quote 2).

Marginalized, but Privileged. The theme of privilege presented itself in two ways. First, some participants who identified as multi-racial or Latina discuss how being able to "pass" as another race or ethnicity afforded them a privilege that others did not have based on their ability to be perceived as a part of an in-group, even if they do not identify as such (Figure 4, quotes 1 and 2).

Similarly, privilege was also acknowledged by some white participants when asked whether they thought their experiences were different from people from other racial or ethnic groups. In some instances, participants expressed that they believed individuals from other racial and ethnic backgrounds likely experienced more barriers and challenges as a result of their racial or ethnic social identities. However, they did not believe their own race was a barrier in their career experiences because they were able to see themselves in others in the field (Figure 4, quote 3).

Possible Selves. As seen in the previous example of privilege, how participants viewed the importance of representation also provided insight into how they viewed factors that influenced their career goals and aspirations. The concept of possible selves reveals connections between cognition and motivation and represents individuals' ideas for the future, including what they might become, and what they desire to become (Markus and Nurius 1986). Participants highlighted examples of seeing other women and people of color as

science professionals and how that had a positive influence on their decisions to pursue a career in science. For example, one participant discussed how all their high school science teachers were women and how hearing about their stories as in science related careers (a dolphin trainer and a retired neurosurgeon) made an impact and allow them to see pursuing a career in science as a possibility. However, this same participant who reflected on positive experiences associated with gender representation in science also discussed the negative impact that lack of representation can have when their race

MENTORSHIP AND SUPPORT

1 I will say in terms of deciding for marine science, I have had a lot of mentors that just in general in terms of gender, strong women, independent women that have always been encouraging and never were "You can't do this." It was always "I did this. So, can you."
- **Multi-racial (White & Black) professional**

2 She didn't give me the paper with all the red scratches or the word document with all the corrections. She just told me that she was not wasting her time on it and that I should go and take basic English writing classes. And that has been something that has... it had a mark. My career and my, I don't know, my person, and I still choke a little about it because it's somebody that I thought I had in my corner and it was completely unprofessional how she handled that, and it was completely rude, how she said it, how she approached it and her attitude. It was completely wrong...She's what at the time I thought was my support system and saying something like that it really crushed me.
- **Latina professional**

Figure 3. Participant quotes representing the mentorship and support theme.

MARGINALIZED, BUT PRIVILEGED



1 I think I've also been very lucky, because when people look at me, they don't know what I am. And I can kind of be a chameleon... I hate to use the term, but I can pass as whatever, as a couple of different things...I don't know if I'm, I guess getting the same benefits as a white person would get...but I do think I've had it much easier than other people.

-Latina graduate student

2 I'm very aware that I'm like half white and I'm white passing, and I'm very cautious that that's kind of helped me. I don't have to face the same struggles as others because I have that privilege. But it's very hard for me because, even though I know that I am white passing, I just don't identify...

-Multi-racial (Asian & White) undergraduate

3 I think being a white person in the sciences, and being a woman has it's challenges, but being white, I never had to deal with issues of representation. You learn about the great white people that have done great white things in science. I feel like that was a barrier that I didn't have to overcome, so maybe getting into the sciences was a lot easier for me because of that... I didn't have to struggle with that extra component of who am I in this field? Where are my people in this field? They were there.

- White professional

Figure 4. Participant quotes representing the marginalized, but privileged initiative's theme.

or ethnic identity is salient. They revealed that they identified as Latina and Native American and discussed the impact of not seeing Native Americans represented in science (Figure 5, quote 1).

For some participants, lack of representation resulted in their decision to pursue careers in marine, aquatic, or fisheries science coming later in life because they did not see being a scientist as a possible career choice (Figure 5, quote 2). As a result, many participants expressed their desire to persist in careers in marine, aquatic, and fisheries science so that they could be sources of representation for future generations of scientists that look like them.

Intersubjective

Many of the themes previously highlighted in representational arena can also represent intersubjective arena, as many of the positive and negative experiences related to representation presented themselves as a result of interpersonal interactions. Below, two additional themes were identified within the intersubjective arena: microaggressions and safety concerns.

Microaggressions. Participants discussed experiencing microaggressions associated with their gender, racial, or ethnic social identities. Sue et al. (2007) defines microaggressions as “everyday verbal, nonverbal, and environmental slights or insults, whether intentional or unintentional, which communicate negative messages to target persons based solely upon their marginalized group membership.” Participants discussed instances in which they were the target of microaggressions from members of gender, racial or ethnic out-groups. In these instances, participants were often subjected to comments

rooted in stereotypes associated with their social identity groups (Figure 6, quotes 1 and 2).

Safety Concerns. Participants also discussed experiences that presented threats to their physical wellbeing. This included examples of how gender and or racial identity resulted in concerns and experiences of sexual harassment and racial harassment in field settings. When discussing their gender, one participant discussed the need to create safe spaces for people and shared safety concerns after revealing that they had been sexually harassed in the field by someone they had to continue working with to complete their field-work (Figure 6, quote 3).

Another participant described their experiences as the only Black student at a program in which they felt they were discriminated against and put in dangerous situations due to her racial identities. They recounted several experiences with a divemaster, in which they were treated differently from the other students, chastised, and ignored (Figure 6, quote 4).

Experiential

How individuals make sense of their abilities and experiences reflect the experiential arenas of social relations. The theme of stereotype threats was identified as representing an example of the experiential arena.

Stereotype Threats. Participants also discussed examples of dealing with stereotype threats. Stereotype threats occur when people feel that they are at risk of conforming to stereotypes associated with one or more of their identities (Spencer et al. 1999). One participant discussed how they constantly have to evaluate what they are saying in a professional setting to ensure they are not conforming to the stereotype of being an aggressive Black woman (Figure 6, quote 5).

DISCUSSION

The objective of this study was to explore the experiences of women and women of color while highlighting the importance of understanding how social identities and intersectionality manifest during the pursuit of careers in marine, aquatic,

POSSIBLE SELF



1 Any time there's a number like the statistics, so like, “Okay, this is how many Caucasian, and this is how many ...” Native American is always just like at the bottom or there's like one. It's always just like, 1% like, “Wow, that's a lot.” A full percent...how do you even feel you can go along if there's nobody there representing you?

- Multi-racial (Latina & Native American) undergraduate

2 I did think I could be anything, it was just that my notion of anything was very small because no one had ever told me scientists don't have to be the smartest people, scientists don't have to be these rich white men who you see as scientists. And so, I just didn't even have the language to express that that's something I might've wanted.

- White graduate student

Figure 5. Participant quotes representing the possible-self theme.

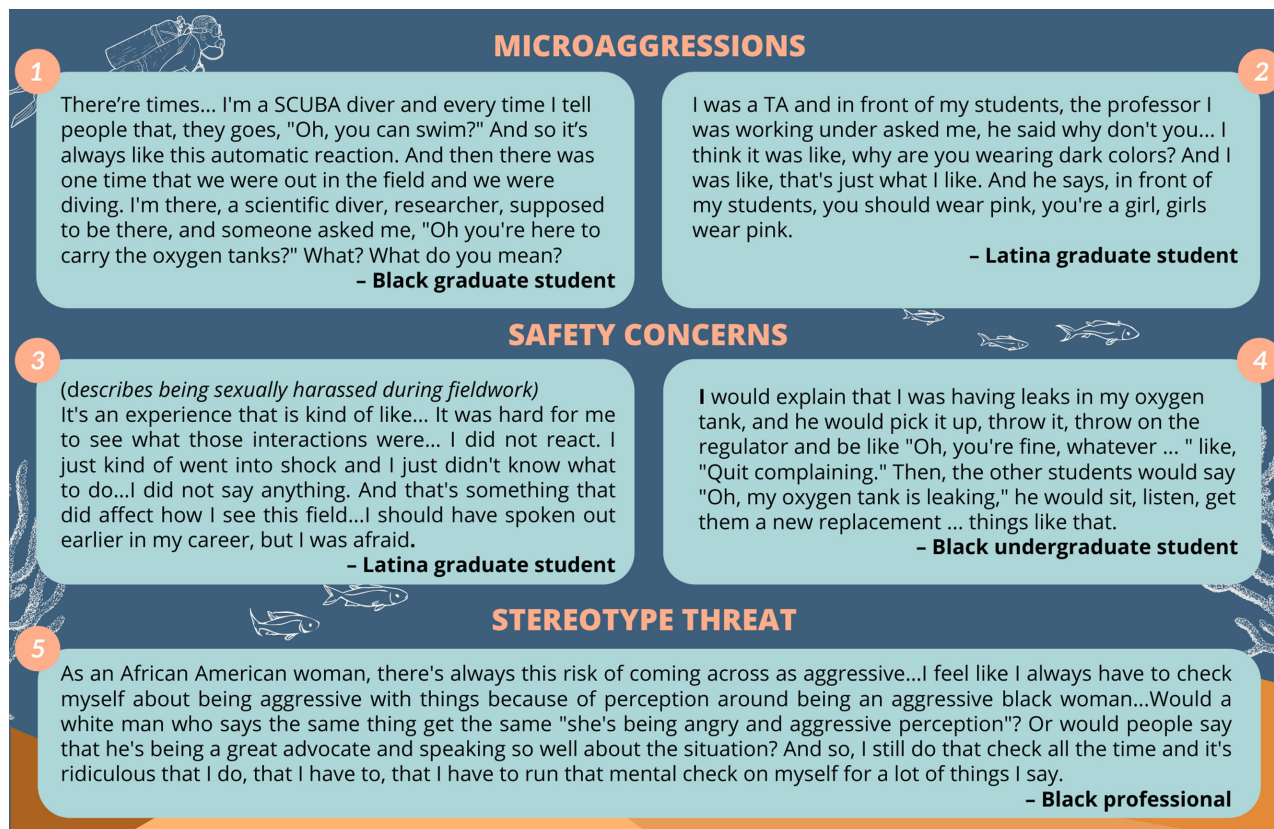


Figure 6. Participant quotes representing the microaggressions, safety concerns, and stereotype threat themes.

and fisheries sciences. My findings suggest that women and women of color experience both positive and negative interactions that can be attributed to the salience of their social identities in the field. Despite efforts, women and women of color remain underrepresented in STEM fields, including marine, aquatic, and fisheries science professionals. On paper, based on the numerical representation of diversity, organizations and institutions may appear to be making progress towards their diversity goals. However, examinations of the experience of people who are socially and professionally labeled underrepresented revealed that some professional environments are not as welcoming (inclusive) as they seem.

My findings highlighted positive experiences resulting from gender, racial, and/or ethnic social identity being represented and salient and revealed instances of in-group favoritism. When identities were salient and experiences presented the opportunity for participants to identify others as a part of their in-group, my results suggested that participants experienced feelings of belongingness and expressed positive evaluation of members of their in-groups. These experiences created spaces for participants to feel like they were welcome as marine, aquatic, and fisheries science professionals. This study also revealed instances where the salience of social identities potentially informed participants' possible selves including experiences associated with diversity initiatives, mentorship, and representation. Other scholars have focused on examining the connections between the concept of possible selves and career decisions, including the decision to become a scientist (Wonch Hill et al. 2017). Research suggests that while possible selves developed on an individual level, they are often the result of social comparisons (Markus and Nurius 1986).

As highlighted in intersectionality frameworks, individuals possess both marginalized and privileged identities, which were reflected in findings that revealed differences in experiences across race and ethnicity. While overall, women are viewed as underrepresented in marine, aquatic, and fisheries science, for some individuals, their privilege identity (e.g., race or perceived race) afforded them the ability to see themselves in others in the field. One participant pointed out feeling like a tolerable minority, which reflects a view of partial acceptance and reflects the fluidity of the intersection of marginalization and privilege, even within a single social category such as race/ethnicity. Research on toleration suggests that it exists somewhere between acceptance and discrimination, where toleration presents the possibility that a person can be included in a shared community or in-group, and discrimination sends a clear sign of difference and out-group status (Cvetkovska et al. 2020).

While positive experiences exist throughout social relations, often associated with in-group identification, findings also highlighted negative experiences resulting from gender, racial, and/or ethnic social identities being salience and revealed instances of out-group discrimination and biases. Negative experiences presented themselves in many forms, including tokenism, microaggressions, stereotype threats, and safety concerns. In these instances, participants provided examples of how their gender, racial, and ethnic social identities reminded them that even though they were establishing themselves as marine, aquatic, and fisheries science, they were still a part of a marginalized out-group. These experiences often result from systems of power based on cultural norms in science which have traditionally minimized the experiences of individuals that do not clearly fit within the system. (Carlone and Johnson 2007;

Byars-Winston and Rogers 2019; Davies et al. 2021). Previous research has explored the experience of individuals who are considered nonprototypical representations of categories and how that results in marginalization (Carlone and Johnson 2007; Purdie-Vaughns and Eibach 2008). Research suggests that non-prototypical representations can result in both invisibility (e.g., feeling excluded, ignored, or that you do not belong), and hypervisibility (e.g., tokenism, extra scrutiny, microaggression) both resulting in negative impacts on experiences as seen in the result (Purdie-Vaughns and Eibach 2008). This is especially true for women of color, who are required to navigate gendered and racialized experiences (Purdie-Vaughns and Eibach 2008; Wilkins-Yel et al. 2019).

Throughout all of the themes presented in the results, there were instances where participants expressed the mental toll that being underrepresented in marine, aquatic, and fisheries sciences had on their psychological wellbeing. Research on social identities and psychological wellbeing suggest that characteristics of social identities, including group identification and belongingness, can have a positive impact on wellbeing (Cameron 1999). Conversely, out-group biases and discrimination can negatively affect psychological wellbeing (Forrest-Bank and Cuellar 2018). However, research focusing on ethnic identities suggests that a strong in-group identification plays an important role in psychological wellbeing and may help mediate some of the negative effects of out-group biases such as microaggressions (Forrest-Bank and Cuellar 2018).

Experiences often resulted in feelings of anxiety, stress, imposter syndrome, and caused participants to question their decisions to continue pursuing careers in marine, aquatic, and fisheries. This is supported by previous literature describing the impact that discrimination, microaggressions, and stereotype threats have on the wellbeing of individuals from marginalized communities (Sue et al. 2007; Forrest-Bank and Cuellar 2018; Wilkins-Yel et al. 2019). Focusing specifically on STEM fields, Beasley and Fischer (2012) found that stereotype threats had a significant positive effect on the likelihood of women and minorities leaving STEM majors. While sometimes minor in a given situation, the combined effects of out-group discrimination and biases that occur throughout the career journey of women and women of color have a lasting effect, which is exemplified by the following quote:

It's unfortunate that I have to navigate my entire career...having to teach people how to talk to me and teach people what they can and cannot say in professional settings or even in casual settings. That there's lots of things that people think is okay and it's not. And that's exhausting.

—Black graduate student

CONCLUSION

This study set out to explore the experiences of women and women of color within marine, aquatic, and fisheries sciences professions across career levels and contributes to the literature by exploring diversity beyond numerical surface levels. My findings revealed that in addition to navigating what it means to be scientists, women, and women of color, also navigated experiences associated with their social identities within marine, aquatic, and fisheries sciences. While all of the participants navigated gendered experiences, women

of color had to navigate gendered and racialized experiences. This emphasizes the importance of taking an intersectional approach to explore diversity and inclusion while highlighting a potential danger that exists when only focusing on the broad social categories (e.g., race or gender) and assuming homogeneity of experiences within these categories. Not only should the focus be placed on the experiences of underrepresented social identity groups as a whole, but also on understanding how multiple identities interact with social relations and cultural norms of science to encourage or dissuade women and women of color from marine, aquatic, and fisheries sciences professions.

The findings of this study highlight the experiences of a small subset of women pursuing careers in marine, aquatic, and fisheries sciences. This study utilized qualitative research methods that reveal examples of experiences of individuals that may have been missed in a generalizable quantitative study. The dichotomy of quantitative vs. qualitative research presents a parallel track to how we often view diversity and inclusion in science. Marine, aquatic, and fisheries sciences often focus on quantitative data and generalizability, and we often rely on numerical representations as a measure of diversity. However, to be inclusive and provide a sense of belonging to our colleagues, we must move away from solely seeking to generalize or quantify individuals from underrepresented backgrounds. Becoming a more inclusive profession requires that we also take a qualitative approach that allows for a deep dive into an understanding of not only what makes us different but also what makes us similar, for example, a shared passion for marine, aquatic, and fisheries science.

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