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More than coping: the multifaceted benefits home and wild food procurement provide to food-insecure practitioners in the Northeastern US

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Abstract

Many food-insecure households in high-income countries produce some of their own food through gardening, hunting, fishing, foraging, or raising livestock—activities collectively referred to as home and wild food procurement (HWFP). This study aims to deepen understanding of the roles that diverse HWFP activities play within the broader set of strategies food-insecure households use to keep food on the table. We conducted interviews with 25 participants in two rural states in the northeastern United States, Maine and Vermont. On average, study participants reported having engaged in 19 of a list of 41 behaviors that can help one's household food situation, not including HWFP activities, in the last year. Overall, they described HWFP activities as socially legitimate food sources that provide multifaceted benefits beyond food. For these interviewees, HWFP can be an effective coping strategy for alleviating household food insecurity because it diversifies their food sources and allows for stockpiling non-market abundances. Yet, HWFP should not be mistaken for a coping strategy in the sense of an activity that households undertake *only* in response to hardship, because participants associated these activities with diverse, positive meanings such as joy, connection, and autonomy. The only negative aspects of HWFP that participants identified were challenges stemming from limited access to key resources needed for successful harvests, such as equipment, skills, and land access. We recommend policies and programs that ensure access to these prerequisites for HWFP success; people experiencing food insecurity should guide these efforts.

Keywords Food security · Coping strategies · Food self-provisioning · Food procurement · Reflexive thematic analysis · Food access

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Introduction

Many residents of high-income countries grow, hunt, fish, and forage substantial portions of their household food supply (Bliss et al. 2025). For example, nationwide surveys show that 8% of all rice consumed in Japan is homegrown (Kamiyama et al. 2023), as are more than 10% of fruits, vegetables, eggs, and potatoes consumed in the Czech Republic (Jehlička et al. 2019). While research on this topic in high-income countries is limited, sources published to date demonstrate that home and wild procurement (HWFP) can potentially contribute to food security through multiple pathways: increasing food availability, improving dietary quality, providing access to otherwise unaffordable foods, and supporting household food supply stability during personal hardships or societal disruptions (Bliss et al. 2025).

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However, little is known about the specific roles that raising and harvesting food for household consumption or sharing—what we refer to as HWFP—plays in the foodways of households that are experiencing food insecurity in high-income countries.

Food insecurity is "the limited or uncertain availability of nutritionally adequate and safe foods, or the limited or uncertain ability to acquire acceptable foods in socially acceptable ways" (USDA 2025). Food insecurity remains common in many high-income countries (Gatton and Gallegos 2023), where it is typically measured using questionnaires that ask whether respondents and their households have felt food-insecure or engaged in coping behaviors associated with lacking sufficient food (Leroy et al. 2015; Ashby et al. 2016; Carrillo-Álvarez et al. 2021). In the United States, 13.5% of people are food insecure, with even higher rates among low-income families, single-parent households, rural residents, and individuals and households belonging to marginalized communities (Carney 2012; Rabbitt et al. 2024). It is important to consider the experiences of these individuals, and how they address their own food insecurity, in research and scholarship.

In many high-income contexts, lower-income and food-insecure households are more likely to engage in HWFP than their higher-income and food-secure counterparts (Alber and Kohler 2008; Church et al. 2015; McCarthy et al. 2025). Some prior studies have thus deemed HWFP a "coping strategy" (Alber and Kohler 2008; Church et al. 2015). In the context of food security, *coping strategies* are actions people take when they do not have enough to eat, or anticipate not having enough soon (Maxwell 1996). Beyond HWFP, coping strategies include skipping meals, reducing portion sizes, eating cheaper foods, asking family for food or money, and sending household members to stay—and eat—with others (Wood et al. 2007).

However, there is no consensus in the literature about whether HWFP is a coping strategy, since people may also engage in these activities for many other reasons. Some studies include HWFP among coping strategies simply because individuals experiencing hardship identify HWFP activities as improving their household food supply (Wolfe et al. 1996; Hoisington et al. 2002; Carney 2012; Minkoff-Zern 2014; Shanks et al. 2022; McKay et al. 2023). Counter to this framing, others have argued that HWFP is *not* a coping strategy because practitioners have described food self-provisioning as a hobby and a source of preferred food, rather than as a coping mechanism (Jehlička et al. 2013; Daněk et al. 2022). These authors lament that the coping label casts HWFP participants negatively, as passive poor people reacting to hardship; they prefer to portray self-provisioning as a positive, proactive act of resilience (Jehlička et al. 2019). Questionnaires that use respondents' engagement in various coping strategies as an indicator for food insecurity also rightly omit HWFP from their lists of coping strategies, since people who are not experiencing hardship also partake in HWFP (and therefore these activities cannot be a reliable indicator of food insecurity; USDA 2012; World Food Programme 2023, 2025).

The discrepancy regarding whether or not to consider HWFP a coping strategy stems from an unacknowledged scholarly disagreement over how to define "coping strategies." There are two implicit definitions at work. First, many studies consider *any* behavior taken to help one's food situation in the face of current or anticipated hardship to be a coping strategy. These are the studies that tend to include HWFP activities among coping strategies, and rightly so: both expert testimony and statistical research suggest that producing some of one's own food can help keep food on the table (Bliss et al. 2024; Niles et al. 2024). Second, other studies—and food security indicators—consider a behavior a coping strategy *only* if it is a behavior that one would *only* do in the presence of current or anticipated hardship. Authors and survey designers working from this second definition tend *not* to consider HWFP activities coping strategies, other than extreme cases like harvesting wild plants that are not normally consumed because they are unpalatable, stigmatized, or poisonous—an activity people resort to when there is little else to eat (Luna et al. 2022; Moore et al. 2022; World Food Programme 2023).

Does this discrepancy matter? We argue that it does, because if HWFP is or is not a coping strategy frames whether addressing food insecurity means (a) liberating everybody from the need to produce any of their own food at all, or (b) supporting people's capacity to successfully grow, hunt, fish, and forage some of their food if they so choose. Either way, special attention is owed to individuals experiencing food insecurity. Some studies have found that the very lowest income brackets in high-income countries have among the lowest participation rates in HWFP activities; their authors have reasoned that the poorest households face the highest barriers to engaging in HWFP (Teitelbaum and Beckley 2006; Jehlička et al. 2013). Among households that do participate in HWFP, those that most need the food deal disproportionately with difficulties that hinder successful harvests. In the U.S. states of Maine and Vermont, the site of the current study, food-insecure HWFP practitioners reported experiencing challenges at significantly higher rates than their food-secure counterparts, despite being significantly more likely to engage in these activities. These challenges included limited time and knowledge, restricted access to land, supplies, money for equipment, as well as issues with pests and poor weather. More than half of food-insecure practitioners mentioned each of these challenges (Angle et al. 2023; Mitchell et al. 2025). Other studies

across multiple contexts have documented similar barriers to HWFP (e.g., Teitelbaum and Beckley 2006; Kortright and Wakefield 2011; Pungas 2023).

It is also important to remember that HWFP provides more than food. Research on gardening, in particular, shows that people engage in food self-provisioning because they appreciate not just the quality and taste of homegrown food but also the opportunity to care for their families and the environment. Gardening offers psychological and emotional benefits by (re)connecting practitioners with nature, reinforcing a sense of cultural identity through tradition, strengthening social ties and sense of community, and fostering autonomy and agency as producers (Kortright and Wakefield 2011; Minkoff-Zern 2014; Soga et al. 2017; Diekmann et al. 2020; Pungas 2023; Sovová and Jehlička 2025). Research on the meanings practitioners ascribe to hunting, fishing, and foraging is sparser, but many of these same values are replicated (Robbins et al. 2008; Arnett and Southwick 2015; Cooke et al. 2018). These studies are mostly limited to single HWFP activities; few have examined multiple practices together (cf. Brown et al. 1998; Teitelbaum and Beckley 2006; Kamiyama et al. 2016; Tatebayashi et al. 2018; Bliss et al. 2024).

Here, we seek to deepen our understanding of the role that various HWFP activities play among the broader array of strategies that struggling households use to help keep food on the table in the rural northeastern states of Maine and Vermont, USA, where HWFP is common (Bliss 2024; Mitchell et al. 2025). Drawing from experiences of food-insecure HWFP practitioners, our study aims to answer three research questions: (1) What practices do Vermonters and Mainers engage in to ward off and deal with food insecurity, and how do HWFP activities fit in among these strategies? (2) What meanings do these individuals attach to HWFP activities? and (3) What influences these individuals' ability to engage in HWFP successfully?

In interviews with gardeners, hunters, and anglers experiencing food insecurity, we expand on the findings of studies that have been limited to a single HWFP activity (e.g., Robbins et al. 2008; Arnett and Southwick 2015; Cooke et al. 2018; Daněk et al. 2022) by asking participants about the full scope HWFP activities they engaged in. Furthermore, unlike the literature on coping strategies, our interviews invited participants to reflect holistically on their relationships with the practices of raising and wild-harvesting edible organisms, including but also going beyond these activities' role as food sources. By exploring barriers to HWFP, we identify what is needed to facilitate successful food self-provisioning among people experiencing food insecurity.

Methods

Study site

Maine and Vermont together comprise most of the land area of northern New England. Both experience a temperate climate with relatively short growing seasons. Among all U.S. states, these two have the highest proportions of their populations considered rural: 66% of Vermont residents and 61% of Maine residents live outside of settlements containing at least 2,000 housing units or 5,000 people (US Census Bureau 2024). Many residents lack nearby food retailers (McEntee and Agyeman 2010), and rural food insecurity is prevalent (Shrider and Bijou 2025). Overall, between 2021 and 2023, an average of 10.9% of Maine residents and 9.2% of Vermonters lived in households experiencing food insecurity, according to the USDA (Rabbitt et al. 2024).

Gardening, foraging, fishing, hunting, trapping, harvesting shellfish, and raising domestic animals for meat, milk, or eggs are common practices in northern New England. Annually, well over half of households in Vermont and Maine engage in at least one HWFP activity (Mitchell et al. 2025). Representative samples of Vermont and Maine residents self-report obtaining about 7% of their household food consumption through HWFP (Bliss 2024). Food-insecure households in these two states are more likely than their food-secure counterparts to participate in all HWFP activities except gardening (Niles et al. 2021; Mitchell et al. 2025). Among Vermont and Maine residents experiencing food insecurity early in the COVID-19 pandemic, those who engaged in HWFP were significantly more likely to become food-secure a year into the pandemic than those who did not practice HWFP (Niles et al. 2024).

Data collection

To learn about how HWFP contributes to keeping food on the table in Maine and Vermont, we conducted semi-structured interviews with people who (a) self-identified as struggling to keep food on the table and (b) engaged in at least one HWFP activity. Institutional Review Board approval for the study protocol was obtained from the University of Vermont (IRB no. 000000873) and the University of Maine (IRB no. 2020-07-11).

Soliciting participants for the study proved to be more challenging than anticipated. Our first solicitation round in the fall of 2024 involved a Facebook ad campaign targeting residents of Maine and Vermont. While we received dozens of responses, we suspected that many of these were bots. We conducted eight virtual interviews that we later removed from our final dataset because we doubted that the interviewees were actually located in Vermont or Maine.

Table 1 Themes, codes (or 'sub-themes'), and emblematic quotes, grouped by research question. The final column shows the number of interviews in which we observed a sub-theme

RQ1				
Theme	Code	Description	Emblematic quote	n
Fluctuations: cyclical *Food-related behaviors respond to seasonal or monthly oscillations in the availability and abundance of particular food sources, or money.*	Stockpiling	Acquiring and storing large quantities of food from sources that are currently abundant, including by preserving foods.	"I get enough fish, I freeze it, and I end up eating it all winter long." (28)	23
	Stacking practices	Obtaining food from many sources to weather the fluctuating availability or accessibility of each one.	"I'll go to veggie stands and get what I don't plant." (26)	24
	Adapting diet	Eating more of the foods that are in abundance during a given period and resorting to less-preferred foods when other options are scarce.	"In the wintertime, my diet becomes very meat-heavy." (9)	15
Fluctuations: "seasons of life" *Food sources shift over the years as preferences, beliefs, and life circumstances change.*	Trying new or lapsed practices	Adding to one's array of food sources in response to changes in interests or access to factors that influence engagement (see RQ3 codes below).	"I actually stopped being vegan because I wanted to hunt and fish so I could procure more food for myself in that way." (27)	12
	Disadopting practices	Subtracting food sources from one's mix in response to changes in interests or access to factors that influence engagement (see RQ3 codes).	"I used to fish. I'm concerned … there was so much chemicals in the paper industry that are still in those rivers." (13)	14
Money *Household finances influence food procurement.*	Saving (or not saving) money	Altering one's financial situation or diet by engaging in HWFP activities that produce food more cheaply (or not) than purchasing equivalent food.	"If I can grow 100 pounds of potatoes, that's gonna save me a couple hundred dollars." (21)	19
	Being motivated by money	Making decisions about food sources and strategies that are influenced by one's financial context or considerations.	"It's extremely helpful to have the other sources of food that aren't from the grocery store." (25)	15
RQ2				
Social connection *Engaging in HWFP creates, deepens, or is facilitated by relationships.*	Doing HWFP together	Relationships with people with whom one engages in HWFP activities.	"When we go fishing, we actually meet other people there who are fishing." (5)	13
	Sharing products of HWFP	Gifts, barter, and shared meals from the harvests of HWFP activities.	"I gave a duck away and then I cooked two and invited friends over … I tend to share." (11)	23
	Teaching and learning	Interpersonal transfers of knowledge and skills related to HWFP, especially intergenerationally.	"I loved when my grandfather would show me around the garden and I'd ask questions about things when I was a kid." (15)	21
	Connection with non-humans	Relationships with the organisms one harvests for food, the places one eats from, or other non-human entities encountered through HWFP.	"It's like the blueberries are excited to see me in August just as much as I'm excited to see them." (27)	13
Experience *Engaging in HWFP and disposing of its harvests are gratifying activities.*	Joy of doing	Pleasure in engaging in HWFP activities, including appreciation of beauty.	"Foraging is like a hide-and-seek game … finding a good ramp patch or mushroom is so exciting." (32)	22
	Joy of knowledge	Pleasure in learning and knowing related to HWFP activities.	"Best thing we've ever done is … help people learn how to grow their own food … especially children, so they can carry that through their lives." (19)	10
	Joy of food	Pleasure in transforming and eating the foods acquired via HWFP, often expressed by comparing them to non-HWFP foods.	"It's fresh, it's wild. … It gives a really much higher quality of food … than you're going to find in a market or a food bank." (10)	18
Identity *HWFP participation reflects one's values and self-perception.*	Sense of self	Portrayals of HWFP participation as an illustration of one's own heritage, virtues, spirituality, or self-ideal as a provider, environmentalist, outdoorsperson, *etc.*	"I was raised hunter-gatherer." (21)	24
	Autonomy	HWFP activities as sources of agency, self-reliance, and independence from commercial food systems.	"Adding … more areas where I can grow food helps me to not have to rely on sources that other people might need more than me." (19)	15

Table 1 (continued)

RQ1				
Theme	Code	Description	Emblematic quote	n
Health *Engaging in HWFP and eating its harvests contribute to wellness.*	Mental health	HWFP's contributions to positive emotions and psychological wellbeing.	"Growing these plants and nurturing them … helps me nourish me, … almost like I'm planting the things that I didn't have in myself." (31)	22
	Physical health	HWFP's contributions to physiological wellbeing, via both physical activity and food quality.	"The things that I'm growing are gonna be healthier for me than something that was grown in California and picked two weeks early." (17)	20
Resistance - resilience *HWFP enhances capacities to avoid, withstand, and recover from events that diminish food supplies.*	Maintaining ecological resources	Practices and values said to enhance the sustainability of edible resources in the landscape.	"When I forage, I have a rule of only taking one-third, and I … teach that to other people when they go out with me." (22)	6
	Skills-based safety net	Engagement in HWFP said to allow households and communities to better withstand declines in food availability or access.	"If you have a skill, you can feed yourself. … They can steal your money, … but, like, at the end of the day, you can eat." (12)	11
RQ3				
Storage and preservation *Prerequisites for taking advantage of abundance when it exists and then stockpiling it.*	Space to process or store food	Kitchens, pantries, a home, or other indoor infrastructure.	"If you're homeless, you can't store food." (30)	4
	Equipment and materials for storage	Cold storage, canning supplies, drying setup, smokers, etc.	"I currently have a five-gallon bucket full of processed fish outside right now, um, 'cause it wouldn't fit in my freezer." (11)	7
	Energy access	Electricity or fuel to run freezers, dehydrators, stoves, etc.	"When our electric started going up and up and up … I got rid of the freezer." (14)	3
Factors in HWFP engagement and success *Prerequisites for HWFP, which can be either barriers to or enablers of successful harvests depending on whether one has these things.*	Equipment and materials for HWFP	Gear and supplies such as fishing rods, tackle, garden tools, seeds, soil amendments, etc.	"The only reason I don't fish now is because I no longer have the equipment." (24)	14
	Personal health	Physical ability to engage in HWFP activities.	"At my age now, after having some medical issues, maybe I don't have the energy to, you know, get in a boat and do all that." (13)	11
	Land access	Secure access to adequate land to grow or wild-harvest food	"I have so many seeds. I just need a place to plant them." (32)	17
	Natural conditions	The right biological, meteorological, and hydrologic presences and absences for successful HWFP.	"I love to ice fish. … I haven't done that in 10 years or so because down where I live, the ice hasn't been good enough to put a shanty on it." (28)	18
	Legal conditions	Laws, regulations, and rights that allow one to source food from HWFP.	"I'm a convicted felon. … I'm not allowed guns that shoot multiple rounds." (21)	10
	Skills and knowledge	Information and know-how for safe and effective HWFP.	"I don't really have any, like, real gardening knowledge. I just kind of do stuff. So, it's hard to say why something isn't working." (31)	23
	Time	Sufficient availability at the right moments for HWFP activities	"Last year … I did not plant a full garden. … With the business and … all the responsibilities I have, I said, 'Okay, I'm putting that aside.'" (25)	8
	Legitimacy	Recognition from others that HWFP activities are acceptable ways to obtain food.	"People might frown upon you fishing … like, 'Let that fish live.'" (11)	6

We then revised our recruitment strategy and created digital and paper posters to advertise the study (see Supplementary Figure S1). Digital posters were distributed through key informant networks, while paper posters were hung at food pantries, country stores, and libraries, and distributed at community meetings and events throughout Maine and Vermont. For those who contacted us via email or using the QR code on the poster, we asked them to complete a brief screening questionnaire to ensure they met study criteria: namely, that in the past year they had both engaged in HWFP and experienced food insecurity. For the latter criteria, we used a validated two-item screening tool derived from the USDA Food Security Survey Module (Gundersen et al. 2017). Additionally, we visited food pantries and distribution sites to recruit participants on site, verbally screening potential participants for eligibility.

After confirming eligibility, we invited participants to an interview either in person at a location of their choosing or remotely via Zoom. Between February and June 2025, we conducted 13 interviews with residents of Maine and 12 with residents of Vermont. We prioritized in-person interviews where possible, both because we value face-to-face engagement and because we believed this setting would create a more comfortable environment for discussing experiences that are often personal and sensitive. We observed that being in the same physical space—often over a cup of coffee or a shared meal—helped build rapport and allowed conversations to unfold more naturally. In the end, 21 out of the 25 interviews were conducted in person.

Our semi-structured interview guide consisted of three sections with questions about HWFP and other food procurement strategies (see Supplementary Document S1). After the open-ended questions, we administered a questionnaire asking participants to identify which of a pre-articulated list of 41 "coping strategies" their household had engaged in during the previous 12 months. The list drew from Wood et al. (2007) and our previous research on this topic. The questionnaire also included basic demographic questions. (See supplementary materials for both research instruments.) We compensated the interviewees $50 for their participation in the interviews; each interview lasted between 45 and 70 minutes. For virtual interviews, we requested proof of residence (e.g., electric bill with a Maine or Vermont address). All interviews were recorded using either a handheld device or the Zoom recording function and were later professionally transcribed.

Analysis

Our 3-person data collection and analysis team (JA, SB, and RES) engaged in a collaborative data analysis process over several months. Our process adapted Braun and Clarke's (2021a) six-phase *reflexive thematic analysis* approach: familiarization, coding, generating initial themes, developing and reviewing themes, refining themes, and writing. Across our first three data analysis sessions—each lasting two to three days—we worked through the first four phases. Before each session, team members familiarized themselves with the data by carefully reading four to five transcripts and annotating the margins with initial codes, observations, and reflections. This initial coding was guided by our three pre-articulated research questions.

During the first collaborative analysis session, we developed initial themes using sticky notes as visual aids. By discussing and grouping these notes, we began developing initial themes for each research question. In the subsequent three coding sessions, we continued this process of collaborative meaning-making to capture new insights or contradictory perspectives. We then used NVivo (Version 14; Lumivero 2024) to code all the transcripts again. We employed a "split coding" approach, whereby each transcript was coded by one researcher and then reviewed by another (Richards et al. 2018). We analyzed transcripts in three batches, meeting after each to discuss our observations. The aim of this phase was to deepen our interpretation through analytic dialogue among all team members.

Throughout the analysis process, we continuously reviewed and refined themes and codes through co-interpretation, while keeping detailed records of all modifications to our evolving codebook. As our analysis progressed, we identified fewer new themes and codes, ultimately resulting in a codebook comprising nine overarching themes and 29 codes (or "sub-themes").

In reflexive thematic analysis, the quality and relevance of themes to research questions matter more than achieving thematic or data "saturation" (Braun and Clarke 2021b). We maintain that our two-phase coding process (manual and NVivo), coupled with ongoing reflection and dialogue, produced a robust codebook that both addresses our research questions and captures the richness of participants' experiences. Table 1 contains all themes, codes, our description of these, as well as emblematic quotes. In both the table and the text, we utilize numerical codes to identify our interviewees.

Positionality statement

All research is shaped and informed by the identities, backgrounds, and values of the researchers. Everyone who contributed to this research lives in Maine or Vermont, and many have spent years engaging in various HWFP activities. While none of us experienced food insecurity during this study, our analysis draws on years of working with people who have. We adopt a constructivist lens (Lincoln

Table 2 Study participant demographics

Participant characteristics		n
State	Maine	13
	Vermont	12
Gender identity	Female	14
	Male	10
	Prefer not to say	1
Race	White	22
	Black African American	3
	American Indian or Alaskan Native	3*
Age (birth year)	1940–49	1
	1950–59	5
	1960–69	5
	1970–79	6
	1980–89	3
	1990–99	5
Highest level of formal education	Some high school (no diploma)	3
	High school graduate (incl. GED)	5
	Some college (no degree)	4
	Associates degree/technical school/ apprenticeship	2
	Bachelor's degree	11
	Postgraduate (e.g., Master's, PhD)/professional degree (e.g., JD)	3
Household income range	Less than $10,000	5
	$10,000 to $24,999	10
	$25,000 to $49,999	6
	$50,000 to $74,999	3
	$75,000 to $99,999	0
	More than $100,000	1

* All of the respondents who selected 'American Indian or Alaskan Native' also selected 'White'

and Guba 2013), viewing reality as socially constructed and maintaining that research holds the power to transform those realities. Consequently, in the discussion section, we offer specific recommendations intended to bridge the gap between academic analysis and social change.

Results

Our 25 interviewees represented a heterogeneous group across age, gender, and educational background (Table 2). Commensurate with the demographics of Maine and Vermont, most identified as white, and, commensurate with the requirement that participants experience food insecurity, the majority reported annual household incomes below $25,000. Ten participants lived alone, while the others lived in households of two to six members. Two of the ten participants living alone were unhoused at the time of their interviews. Ages ranged from 26 to 80 years. All but three participants reported engaging in gardening in the last 12 months, and more than half had gathered wild edible plants. Of the five categories into which we grouped HWFP activities—gardening, hunting, fishing, foraging, and livestock raising—participants had engaged in a mean of two of these activities over the last year (Fig. 1).

Beyond HWFP activities, interview participants identified having engaged in, over the previous year, on average 19 of the 41 behaviors for keeping food on the table that were listed on our questionnaire (see Fig. 2). The number of these non-HWFP strategies ranged from 9 to 32. The most commonly used strategies are by no means specific to households coping with food insecurity: eating the same foods repeatedly (22 of 25 participants), cooking in bulk and eating leftovers (22), buying non-brand items (22), and receiving gifts of food from friends, family, or neighbors (21).

HWFP as food acquisition

Participants reported acquiring food from a variety of sources to deal with the reality that each source of food, or money for food, was not always available. They also said they ate and stocked up on whatever happened to be abundant. When discussing managing household food supply, HWFP was described as just another food source.

Managing fluctuations

For our interviewees, who all had recent experiences of food insecurity, no food source was available 100% of the time. Money for groceries often ran out before the next paycheck. Rural food pantries were open only for limited hours, often once per week or less. Supplemental Nutrition Assistance Program (SNAP) benefits were used up before the end of the month. Likewise, HWFP was subject to cyclical fluctuations: gardens produce vegetables during half the year, at most; each foraged fruit, leaf, or fungi emerges only seasonally; the seasons for legally hunting large game species are only a few weeks long.

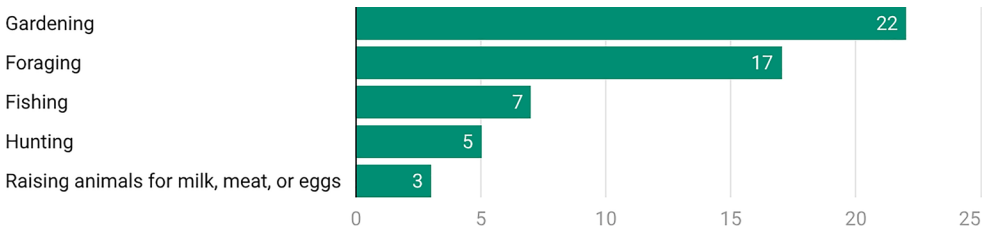

Fig. 1 Number of interviewees engaged in different HWFP activities during the last 12 months

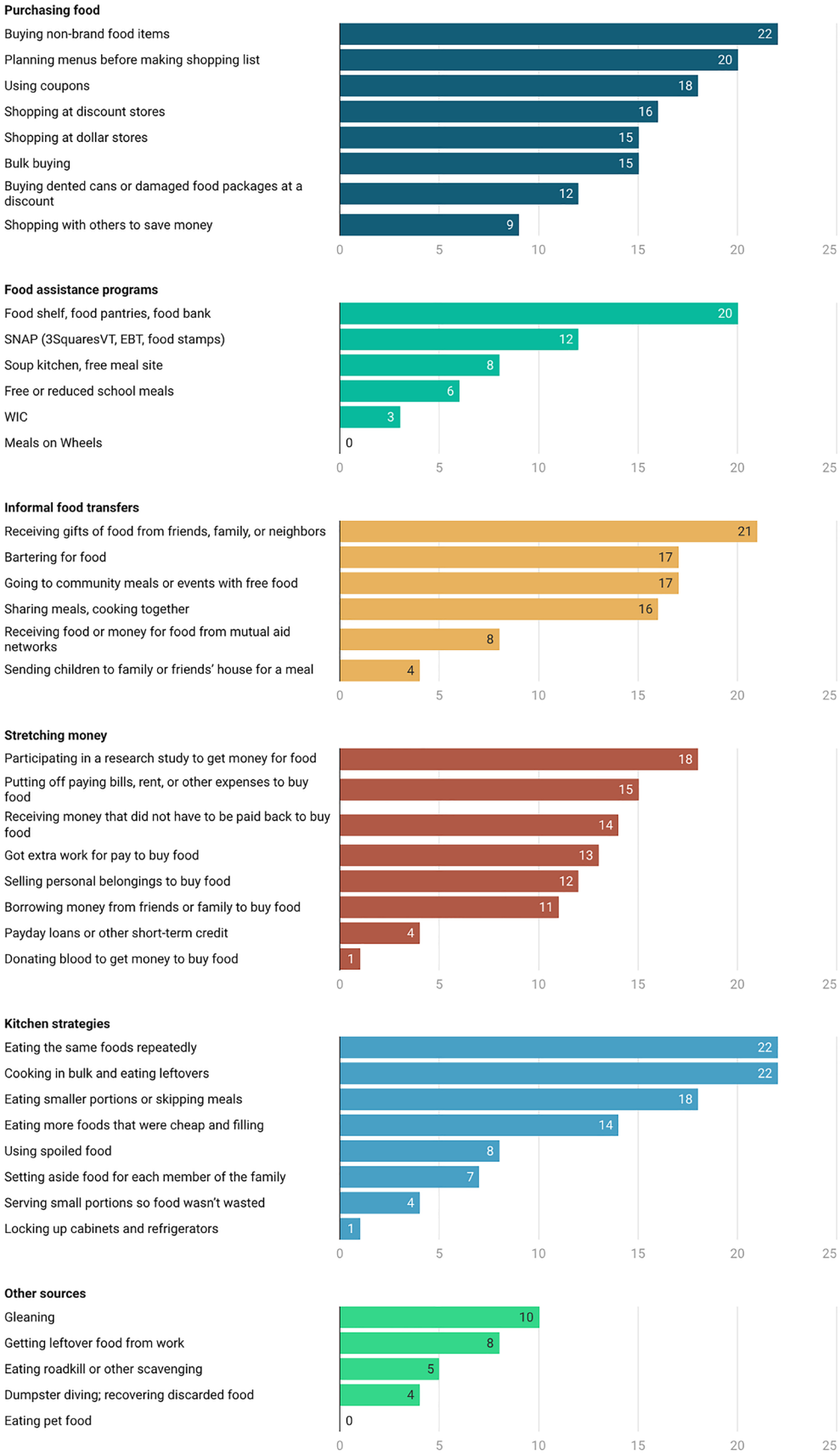

Fig. 2 Number of interview participants, out of 25 total, whose households had engaged in each of these non-HWFP strategies in the last 12 months. (SNAP = supplemental Nutrition assistance Program; WIC = special supplemental Nutrition program for women, infants, and Children; EBT = electronic benefits transfer)

Interviewees described three main strategies for keeping food on the table in the face of such fluctuations. First, they reported obtaining food from many sources simultaneously, or *stacking practices*. Figures 1 and 2 demonstrate the diversity of places and activities from which participants' households acquire food. Participants maintained an array of food sources to deal not just with cyclical fluctuations but also with unpredictability. A single parent said, "You have to … know that some of these strategies aren't going to work and have backup plans. … The free pantry or the garden that was providing today may not provide tomorrow" (9).

Second, nearly every participant described dealing with fluctuations by *stockpiling* foods during times of high availability. Stockpiling practices include canning abundant garden produce, filling a chest freezer with venison after harvesting a deer, or stocking cupboards full of free or cheap "backup food we don't want to eat, so I know, for sure, we're not going to starve" (15). Fifteen of 25 participants indicated that their household had bought food in bulk in the past year.

Third, many participants described *adapting their diets*, or purposefully eating more of what is abundant when it is available: fresh greens in the spring, ripe fruits in summer, game meat according to regulated hunting seasons, or whatever is on sale at the store. One hunter said, "So I have had squirrel a couple of times … not my number one pick, but there's a lot of them" (11). Many participants also adapted their diets by eating what they have stockpiled when other sources are scarce: root vegetables and meat in winter, or non-perishables from the food pantry when funds ran low. Finally, participants described altering their household's suite of food acquisition strategies over time in response to changes in their circumstances or motivations. These shifts could be classified as either *disadopting practices* or *adopting new or lapsed practices*.

Financial considerations

Often, interviews described *being motivated by money* as a key reason for engaging in HWFP. Some participants claimed that HWFP helped their food security via the *cost savings* associated with procuring food they do not have to purchase. Because of foraging and gardening, one said, "I have better quality, more nutritious food, you know, available seasonally, that I wouldn't probably be able to afford … blackberries or ramps and stuff like that" (24). But others, considering the costs and benefits of engaging in HWFP, were less certain that these activities actually save them money. "It's certainly cost-effective, but the question is time," said a young woman. "If you put my hourly rate and multiply it by [the] time we've spent, I'm not sure if … we're making money or saving money." She went on to acknowledge that HWFP is, however, actually more than just another food source, and the work does not always feel like labor: "Part of it is the enjoyment factor and part of it is also the health factor. … It's a little bit hard to delineate the extent to which it impacts finances or food insecurity because there's so many factors at play" (22).

Meaning and motivation

Participants ascribed a diversity of meanings to HWFP activities. All of these meanings were portrayed in positive terms: engaging in HWFP was said to deepen their relationships, spark joy, protect their autonomy, and improve their health, among other contributions to satisfying personal preferences and supporting the public good.

Social connections

For our interviewees, connecting with both people and non-human beings (plants and animals) was a central aspect of HWFP. Many described experiences of *doing HWFP together* with others, emphasizing the enjoyment it brought, the chance to build new relationships, and the added sense of safety when hunting or foraging. *Sharing the products of HWFP* was also a common practice: nearly all interviewees spoke of giving away homegrown or wild-harvested foods, and many also mentioned receiving foods others had self-provisioned. Some spoke of barter relationships—"you smoke the fish I caught and we each get half" (28), for example—but gifts more often existed within webs of untracked reciprocity. As one person explained, "I'm always giving stuff away. And part of the reason why I love doing that is somehow it always comes back to me" (12).

Most participants spoke of how *teaching and learning* about HWFP facilitated relationships, especially across generations and among those with different degrees of experience. Some expressed willingness to share their skills, particularly with individuals who faced barriers to participating in HWFP. One participant highlighted the cumulative effects of teaching others to garden: "If you can educate 20 other people and let's say half of them do something … that's 10 more people growing their own produce. That's a step in the right direction" (13). This comment exemplifies how interviewees implied that *more* people doing *more* HWFP was so obviously a good thing that this underlying assumption needed no explanation.

Finally, several participants emphasized how HWFP enabled meaningful *connections with non-humans*. As one participant shared: "I'd say plants are my pets. I love to see their changes. I love to see how they move with the sun or through the season" (15). Such relationships deepened

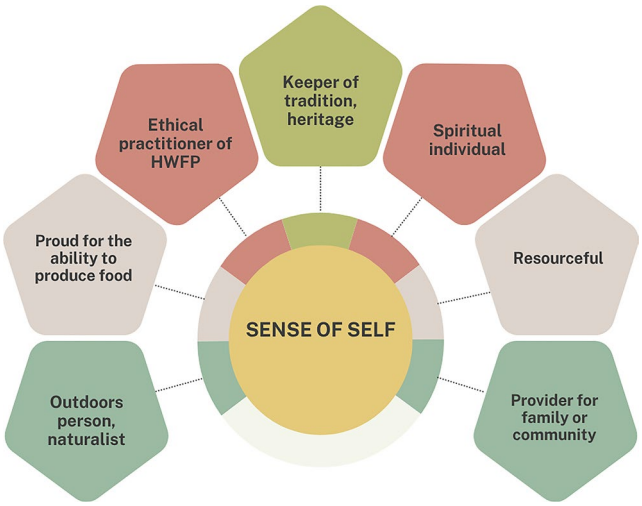

Fig. 3 Elements of *sense of self* as HWFP practitioners

participants' sense of connection to place and helped them feel more grounded.

Joy of product and process

Engaging in HWFP enabled people to access and consume foods that aligned with their personal preferences and brought pleasure. We termed this *joy of food*. Study participants commonly expressed that what they hunted, foraged, fished, or grew themselves was better than comparable foods they could buy. They perceived HWFP foods as healthier, fresher, tastier, or of higher quality. Some attributed the superiority of self-procured foods to the connection formed through procuring the food themselves; others valued the creativity involved in experimenting with new recipes, or the diversity HWFP added to their diet.

The majority of interviewees also found HWFP activities to be fun and fulfilling, which we referred to as the *joy of doing*. One interviewee explained, "It's a passion to walk through the woods and find flowers and food, and it's so fascinating … to think I can come home, feed a family, and put stuff in the freezer" (18). Participants repeatedly described feeling wonder and excitement—even when HWFP activities were not successful in providing food—and many remembered stories from fishing trips or growing seasons years ago. Additionally, the *joy of learning* was present in several interviews, with participants explaining how increased knowledge fueled their desire to learn even more about HWFP practices.

Sense of self and autonomy

Procuring food through hunting, fishing, gardening, foraging, or raising backyard animals was closely connected to how people saw themselves. Interviewees' narratives revealed various identities that we interpreted as reflecting their *sense of self* as HWFP practitioners. Figure 3 illustrates examples, such as being a keeper of traditions/heritage, an ethical practitioner of HWFP, or a spiritual individual. For example, some interviewees connected their HWFP practices to their cultural backgrounds, with one stating, "I come from French-Canadian heritage—we are thrifty" (10). Many saw HWFP as a way to carry forward family or cultural traditions. Others shared stories of land stewardship and responsible procurement practices, revealing how participants' personal ethics guided their approaches to HWFP. One participant said, "I feel like there's a responsibility that I owe to the ground that I inhabit. And I believe that I have been afforded the privilege to be able to explore that more" (9). Finally, several participants described the spiritual dimension as integral to both their connection with nature and to the HWFP practices. As one interviewee explained, "Foraging and fishing and growing food definitely are a spiritual practice for me, and especially in the sense of trying to do in a way that works with the earth" (27).

More than half of the participants discussed how HWFP contributed to their sense of *autonomy*. They explained how HWFP practices helped reduce dependence on market foods, which was particularly important during challenging times. An elderly canning enthusiast reflected, "I've always been a what-if person. What if something gets worse? I [want to] be able to take care of myself" (19). For those living in remote areas with limited food access, HWFP provided a dependable source of food independent of government or charitable assistance. Many participants also spoke with pride about how their HWFP demonstrated their self-reliance, resourcefulness, and personal agency. One participant said, "As long as you have a skill and the ability to feed yourself, that isn't anything that anybody can ever take away from you" (12).

Health

Participants testified that HWFP benefited both their mental and physical well-being. When speaking to *mental health*, one person explained, "Whenever I feel depressed or angry … I just take the boat, and I go fishing, and it helps me to relax"(5). Another shared, "Being in the sun, breathing fresh air, being surrounded by nature, it's the best thing for your mental health" (24). Other participants described how doing HWFP helped strengthen the mind, better preparing them to cope with hardships and heal emotional wounds. While some valued HWFP activities for providing spaces of solitude and introspection that they found calming, others appreciated how engaging in HWFP reduced isolation through social interactions.

Benefits for *physical health* emerged from both doing HWFP and consuming its products. Many participants reported experiencing improved physical health from the exercise involved in HWFP as well as the nutritional benefits of eating wild and self-grown foods. One participant shared that after an open-heart surgery, their doctor "prescribed" more hunting time as beneficial for heart health, while also recommending eating the lean game meat they would thus procure. Parents spoke of wanting their kids to grow up eating healthy and diverse diets. One interviewee who gardened, fished, and hunted explained, "I know that the food that's going into my child's belly is going to nourish them and that it's not gonna screw them up" (9).

Ability to engage

When we asked interview participants about the challenges they faced in their HWFP practices, they responded, collectively, with a list of prerequisites for success: skills and knowledge, a conducive natural environment, access to land, equipment and supplies, personal health and legitimacy. A lack of access to these things constituted a barrier to HWFP. Additionally, prerequisites for successful stockpiling of foods—cold storage, canning materials, dehydrators—was identified as its own theme. Food preservation practices are not HWFP activities as such, but they do enable households to make use of greater quantities of homegrown and wild-harvested foods.

Facilitators when present, barriers when absent

Participants said they acquired *skills and knowledge* related to HWFP from family, formal education, online research, experienced practitioners, and non-human teachers such as plants or animals. Types of knowledge participants described included which wild species are edible, where to find them, how to prepare them, and methods for growing abundant, high-quality produce. Among the interviewees, those that had grown up gardening, hunting, fishing, foraging, or raising livestock indeed tended to report much greater success in producing substantial quantities of food through these practices than those who began participating in them as adults. Skills and knowledge were often situated within interviewees' relationship with their local environment. As one individual noted, "I have spent most of my life right here, on this land here. … I know where to feed myself if I get hungry" (21). Another interviewee, by contrast, indicated that she had foraged in the past in other places, but in her new location, "I don't really know where to go … I don't want to wind up eating the wrong thing" (31).

The *natural environment* in which interviewees practiced HWFP strongly influenced their success. Pests like insects, birds, and rodents reduced the quality and quantity of garden produce. Predators killed backyard chickens. Concerns about chronic wasting disease in deer and ticks carrying lyme disease dissuaded participants from hunting. Others expressed worry about pollution contaminating wild foods. Heat, wind, soil texture, shade, and a short growing season were also referenced as challenges, particularly for gardeners and ice fishers. Several interviewees specifically identified climate change as altering seasonal conditions. According to one interviewee: "My home can't provide enough water from my well to my garden. With the droughts that have come with the climate crisis I can no longer plan on that" (16).

Several interviewees shared that they felt fortunate to have *access to land* through friends or family, allowing them to hunt, fish, or forage. Limited land access presented a challenge to other interviewees, however. As one forager stated, "There's a lot of private property. … I know there's fiddleheads [but] I can't touch them" (27). Others noted that housing developments had eliminated places where hunting had historically been possible. Limited land access was particularly challenging for interviewees who did not have access to reliable or affordable transportation. Having enough space to practice HWFP was a frequent theme discussed by interviewees, especially gardeners whose ability to grow food hinged upon unstable housing.

Whether interviewees had access to *equipment and supplies* influenced how they did, or did not, engage in HWFP. Income-limited individuals discussed having insufficient access to basic supplies for activities such as gardening. One interviewee shared their frustration, "The birds [ate] half of the green blueberries … should I put nets over it? I can't even afford nets" (24). Others indicated that they either had private access to equipment and supplies, or shared community resources. For gardeners, this included greenhouses, seeds, seed starting areas, garden beds, cold frames, and fencing. Hunting and fishing were two HWFP activities that interviewees noted required expensive equipment and supplies: rods, boats, warm clothes, thermoscopes, bows, rifles, ammunition, deer stands, GPS units, and licenses. One interviewee who indicated an unfulfilled desire to hunt stated, "It's expensive to get that going, and we just didn't have the means" (18).

Interviewees referenced *personal health* issues, both chronic and acute, as hindrances to their abilities to engage in all HWFP activities. A gardener described why she could not grow food as much as she had in the past: "I'm older now, and I have a leg injury where sometimes I can barely walk" (24). In addition, concerns about health effects were identified as reasons why interviewees would avoid some types of HWFP in the future. For example, a participant said they no longer hunted or fished for food because "there's a

deer wasting disease … and fishing has pollutants now … so I don't do any of those things" (16).

Interviewees also shared that *legitimacy* influenced their ability or willingness to engage in some HWFP activities. As one hunter described, "I don't want to be anywhere near a hiking trail because I don't want people to go, 'Oh, that guy has a firearm.' I don't want people to be intimidated … there's a stigma" (11). One Black interviewee described having the police called on him while walking through the woods wearing orange and carrying a firearm, even though he was following every rule. He perceived a racialized component to interpersonal conflict over his home garden, too:

> We're having a problem with a neighbor who does not like the idea of us growing vegetables on our own property … she thinks that it devalues or lowers the property value. … I'm not selling drugs. I'm not toting guns. I'm growing vegetables … There's no winning. (12)

While following the law protected this participant's right to hunt and garden even if others disapproved, for some interviewees *legality* was a barrier to HWFP participation. One person, for instance, said they could not get a hunting license because they had a medical marijuana card; in Maine, one cannot have both.

About half of the people we interviewed offered ideas for how *programs and policies* might be designed to help overcome barriers and challenges in HWFP. Examples included encouraging municipalities to expand community gardens, advertise them at town meetings, and plant street trees that produce edible fruits and nuts. A few participants suggested that people experiencing poverty should get free or discounted gear, plant starts, or hunting and fishing licenses. "I'm not asking for a handout," one hunter said. "I'm actually trying to pull myself up by my bootstaps" (12). Others called for educational opportunities, including programming that introduces people from traditionally excluded groups—specifically women and people of color—to hunting and fishing.

Barriers to processing and preserving

The ability to preserve or store HWFP harvests allowed individuals and their households to make use of larger harvests than they otherwise could. However, having *space to store and process* HWFP foods was presented as a limitation by several interviewees. This barrier was especially acute for the two participants who were unhoused at the time of their interviews. One said, "You can't [stockpile food] if you're homeless. You don't have [any]where to keep it" (30). Second, having access to *equipment and materials for storage* was reported as a way to extend the HWFP harvest, or a limitation when these supplies were lacking. This was particularly true when the primary mode of preservation was freezing. One gardener-forager described how freezing food extended their access: "Having a small chest freezer [makes it] worthwhile … it really does help in the middle of winter when you're able to pop out some last year's mushrooms or blueberries" (16). Another described how limited freezer space also limited the degree to which they could use HWFP—specifically meats and fish—to meet their own food needs.

Lastly, *energy access* impeded participants' ability to use HWFP. Specifically, this theme refers to the cost of electricity or fuel to run refrigerators, freezers, dehydrators, or other equipment associated with food preservation and storage. Interviewees related stories in which lack of money to pay for electricity caused them to choose to reduce the number of freezers they used, or even lose significant amounts of frozen food: "Our electricity was cut off and most of the food in our storage just went bad" (5).

Discussion

The food-insecure people we talked to in Vermont and Maine gardened, hunted, fished, foraged, and raised animals as part of their integrated strategies for feeding themselves and their households in the face of hardships. In this sense, HWFP is indeed a coping strategy. However, these interlocutors also enjoyed and cherished HWFP activities. The only negative things they said about their experiences related to HWFP had to do with difficulties that hindered their participation or their harvests. For them, HWFP is not a coping strategy in the sense of an activity that they would *only* do under duress. In the following sections, we expand on this interpretation of our findings.

HWFP keeps food on the table

Stories from study participants show that HWFP can help improve food security, a finding supported by much previous research (Bliss et al. 2025). Participants reported that HWFP helped them weather inconsistencies in accessing food from other sources, particularly during periods of economic hardship. They testified that homegrown and wild-harvested foods contributed to their food security by diversifying their suite of food sources. This substantiates the argument made by Jehlička et al. (2019) that HWFP enhances resilience because households that integrate purchasing, receiving gifts, and self-provisioning are less vulnerable to disruptions to any one of those streams. Within

each one of those categories, this study's participants tended to have several distinct food sources (see Figs. 1 and 2).

Moreover, our interviewees' emphasis on stockpiling foods, including HWFP harvests, replicates a common finding that most food gardeners preserve or freeze some of their harvests to consume outside of the growing season (Quandt et al. 1994; Niles et al. 2021; Gulyas and Edmondson 2024). Our findings demonstrate that stockpiling applies to HWFP activities beyond gardening. It had been suggested that storing one's harvests contributes to the stability dimension of food security (Bliss et al. 2025); the HWFP practitioners we interviewed corroborated this.

Participants' experiences of adapting their diets based on availability aligns with previous findings that gardeners eat more fruits and vegetables during the growing season (Algert et al. 2016; Bail et al. 2024). Additionally, our participants' perceptions that producing some of their own food saves them money if, and only if, they ignore the hypothetical monetary cost of their labor is echoed by the few existing cost-benefit analyses of home gardens (Langellotto 2014; Csortan et al. 2020). The present study's results point to a need to assess the economic costs and benefits of HWFP activities other than gardening. Yet, as our participants suggested, it is not straightforward whether HWFP labor should count as a cost, a benefit, or something else entirely, since the work of self-provisioning does mean forgoing alternative activities but also brings connection, stress relief, and other positive values (Bliss et al. 2025).

People engage in HWFP for more than the food

Participants engaged in HWFP for reasons beyond satisfying basic food needs. Their stories of joy, well-being, social connection, and resilience mirror previous research documenting the diverse meanings practitioners attach to HWFP. The novelty of this study lies in its focus on multiple HWFP activities rather than a single practice, demonstrating that these meanings and values are evident across different forms of HWFP participation.

Specifically, our findings reinforce previous research showing that HWFP helps sustain, reproduce, and strengthen social connections (Brown et al. 1998; Poe et al. 2014; Arnett and Southwick 2015; Gigliotti and Metcalf 2016; Diekmann et al. 2020; Kamiyama et al. 2023). Our interviewees also spoke about how HWFP deepens their relationships with non-human beings. These findings resonate with Pungas (2020) study of gardeners in Estonia, which uses the lens of *care* to describe how gardening "stems from and expresses itself in, above all, the desire and commitment to care for and to steward—the environment, the community and oneself" (p. 69).

Participants' descriptions of HWFP products as preferred foods emphasize that self-produced or -harvested items are distinct from—and not directly interchangeable with—other food sources. Our interviewees' testimonies illustrate the importance of having the ability to choose what one eats, a dimension supported by previous research (Cooke et al. 2018; Jehlička et al. 2019; Diekmann et al. 2020; Pungas 2022) and reflected in the *utilization* pillar of the food security framework. In their study, Diekmann et al. (2020) show that growing one's own food allows individuals to step outside conventional food systems where they may often feel powerless, and reclaim some sense of control. Our interviewees' experiences echoed this sense of agency as well as independence from market food sources.

Consistent with earlier studies (Church et al. 2015; Pungas 2020; Plieninger et al. 2025; Stewart et al. 2025), interviewees attested to the connection between HWFP and physical and emotional well-being. This relationship stems from both engaging in HWFP activities and consuming their products. These preventive public health benefits may be overlooked if HWFP is viewed solely as a means of meeting basic food needs.

To summarize, our interviewees engage in HWFP for many reasons, not just as a way to cope with hardship. Indeed, food-secure households in Maine and Vermont are as likely to garden for food as food-insecure households (60% in both cases), and about a quarter of food-secure households fish, hunt, forage, and keep poultry for food (Mitchell et al. 2025). These findings align with scholarship that emphasizes the positive and transformative aspects of HWFP, rather than its association with poverty or necessity (Jehlička et al. 2019; Daněk et al. 2022).

Barriers to HWFP are barriers to food security

According to our findings, practitioners of HWFP believed they needed skills and knowledge, adequate conditions, land access, supplies, social legitimacy, and an able body. Without these, HWFP was difficult if not impossible. In essence, these factors facilitated food security, via HWFP harvests, when they were present, but inhibited food security when they were absent.

Here, we highlight the need for a more careful consideration of the connection to food security. There is, for example, scholarship demonstrating that women and racialized peoples experience exclusion and bias in predominantly white, male hunting spaces (Boglioli 2009; Martino 2023; Tickle et al. 2024), but little recognition that this barrier to participation in hunting can also be a barrier to feeding one's household. The present study makes clear that the social legitimacy of wild food practices like hunting—a topic that is well-studied (Peterson 2004; Fell 2008; Fischer et al.

2013)—matters not just for outdoor recreation and natural resource management but also for food security. The causal pathway from stigmas or prohibitions on hunting to effects on food security is firmly established among Indigenous groups and in the Global South (Theriault 2011; Friant et al. 2020; Strong and Silva 2020), but rarely acknowledged in high-income societies.

Fundamentally, the dual nature of these prerequisites for HWFP success deserves attention. Skills and knowledge, for instance, can interact in a virtuous cycle with HWFP engagement, whereby knowing how to do these practices enables participation and thus food production, which in turn begets more learning—a dynamic on which much has been published (Datta 2016; Garcia et al. 2018; Budowle et al. 2019; Cramer et al. 2019; Pontius 2020). Developing HWFP skills at a young age plays an important role: our findings suggest that those interviewees who started doing HWFP as children or teenagers were more successful in producing abundant harvests. The reverse side of this coin has received less attention: the loss of HWFP skills among the general population in industrialized societies, as agriculture comprises an ever-smaller portion of the workforce, has not been the subject of any studies, to our knowledge. (Again here, research in Indigenous communities has addressed how settler-colonial authorities have compromised food sovereignty by purposefully suppressing knowledge related to growing and wild-harvesting traditional foods; see, e.g., Burnett et al. 2016).

The discussion of how difficulties in HWFP affect food security draws our attention, moreover, to the limits of methodological individualism—how our studies tend to see connections between people or households as effect or cause only, and not as emergent constituents of the system in their own right. To overcome barriers related to personal health, for instance, our findings suggest a need for accessible design and adaptive equipment to help elderly and disabled people participate in HWFP. Such programs could have considerable cobenefits (Kwack et al. 2005), since HWFP can provide myriad health benefits (Soga et al. 2017; Ahmed et al. 2022; Bail et al. 2024), and individuals with disabilities are more likely to be food insecure than non-disabled individuals (Heflin et al. 2019). But these individual-level measures are not the only ones: able-bodied individuals can do HWFP collaboratively with elderly and disabled community members, or just give the produce to those who cannot grow their own. One study of a community giving garden in Maine demonstrated that the project meaningfully contributed to the food security not only of seniors who participated, but also of other seniors who received the resultant produce through deliveries and donations (Tims et al. 2021). Studies of communities rather than just individuals could uncover more evidence related to how food sharing and collaboration enhance HWFP's contributions to food security.

Programmatic and policy implications

Based on our findings and prior scholarship, we suggest that a discrete set of policy interventions are called for. First, we propose an expansion of policies and programs that aid low-income households in meeting the prerequisites for HWFP success. To combat the negative effects of deskilling, programs that promote skill and knowledge sharing should be housed in organizations where limited-income individuals are likely to gather. For example, the federally-funded Head Start program in the United States has long been recognized for its positive educational interventions targeting families with preschool-aged children (Gooze et al. 2012; Smith and Cuesta 2020; Mofleh et al. 2021). While efforts to integrate gardening in these programs exist, their success has been inconsistent (McMillen et al. 2019). Ensuring that programs that serve families and individuals experiencing food insecurity are supported with adequate staff, staff training, supplies and materials, and a program structure that aligns with the growing season could improve gardening lesson outcomes. To make such changes, institutional buy-in is required.

Other examples of programs that support the development and sharing of HWFP include seed libraries housed at public libraries (Cohn 2024), no-cost educational opportunities, free or discounted licenses for hunting and fishing, and public transportation to community gardens and places to hunt, fish, and forage. These options address barriers to HWFP identified by our interviewees or previously articulated in the literature. All require federal, state, or municipal support of some kind, or at least permission for community-organized efforts.

To ensure autonomy and equity, there is a need for more forums where food-insecure HWFP practitioners could propose and participate in designing these policies and programs. A systematic review of a variety of community-based participatory food security interventions demonstrates that such programs are good at generating interest (Knezevic et al. 2014), prevailing against experiences of disempowerment (Putnam et al. 2014), addressing the lived experience of target population (Doustmohammadian et al. 2022), and by extension achieving food security. Our interviewees voiced many unique recommendations related to what types of policies and programs could be used to support food security through removing barriers to HWFP. We propose that engaging individuals who have experienced food insecurity *and* have HWFP skills and knowledge in the development of novel policies and programs is the most

common-sense way to address barriers to these coping strategies for a broader group of people.

Study limitations

This study has three main limitations. First, our recruitment methods likely excluded food-insecure HWFP practitioners who did not self-identify as struggling to keep food on the table. Their stories may have differed from those represented here. Second, the experiences of one Black interviewee—who reported being harassed for carrying a firearm in the woods and for growing vegetables at home, both in ways that indicated his race was relevant—may not apply to all HWFP practitioners of color. However, these findings do suggest that this group faces additional barriers to HWFP that we were unable to explore further. Third, the fact that interviewees described HWFP in overwhelmingly positive terms may in part be a reflection of the framing of our questions. We did not, for example, directly ask if they ever experienced gardening or hunting as drudgery. Future research should examine the racialized experiences of HWFP practitioners in predominantly white states, explore the perspectives of food-insecure practitioners who do not self-identify as such, and investigate potential negative meanings associations with HWFP.

Conclusions

Most northern New England households engage in home and wild food procurement (HWFP) as one of a diverse set of strategies that food-insecure households use to keep food on the table. However, the topic of how HWFP practices, including fishing, hunting, gardening, and foraging, contribute (or do not contribute) to food security is understudied in the context of resource-rich industrialized societies. This study offers new evidence on how participation in HWFP activities supports food-insecure individuals, including but not limited to meeting their nutritional needs. Our interviews with HWFP practitioners in Maine and Vermont show that these activities enabled them to diversify their food sources and accumulate non-market abundances, which we called stacking practices and stockpiling. If coping strategies include all activities that help deal with food insecurity, then HWFP is an important one.

However, the stories that our study participants told also demonstrated that they would choose to engage in HWFP activities even in the absence of hardship. A few interviewees stated this explicitly. Many took it for granted that doing HWFP was a good thing; it was so clear to them that HWFP activities were legitimate ways to obtain food that instances in which others' behavior suggested that they did not view HWFP as socially acceptable had imprinted themselves as vivid stories in the memories of our participants. The only negative comments interviewees made about HWFP engagement were related to barriers and challenges; all the meanings participants ascribed to HWFP were associated with positive things like joy, connection, purpose, autonomy, and self-actualization. Nobody mentioned drudgery. If coping strategies are defined as actions that one only takes in response to current or anticipated hardship, then HWFP is not a coping strategy.

It is beyond the scope of this paper to suggest which definition of coping strategies is "correct." There are good reasons to study all strategies that help manage food insecurity, as we did here, and there are also cases in which it makes sense to look only at that set of coping strategies that clearly indicate food insecurity. On one hand, it feels strange to refer to activities that people of all social classes engage in, such as gardening or eating leftovers, as "coping strategies." On the other, research on how households manage food insecurity would be incomplete if it omitted these strategies, since they do help. It is our hope, for now, that research on coping strategies going forward acknowledges that there are multiple ways of defining the concept and states which definition is being used. Likewise, we call on researchers of HWFP to keep in mind that these activities provide both food and many other values.

While the HWFP practitioners we spoke with would surely benefit from enhanced stability in their household finances, they did not wish to be liberated from provisioning some of their own food. Rather, our findings suggest that they need policies and programs to support their capacity to grow and procure substantial, consistent harvests. Practically, measures that help economically precarious households overcome the barriers to successful HWFP can also improve their food security. The same factors that are barriers when absent become facilitators once they are present: supplies, skills, knowledge, legitimacy, land access, and an able body. We recommend situating learning and engagement opportunities within programs and organizations that already serve households prone to food insecurity, such as those in low-income and rural communities. Material barriers can be lowered through offers that reduce financial investments needed to practice HWFP. Lastly, we suggest that people with direct experience of food insecurity be centrally involved in the development and deployment of programs and policies that seek to address hunger and subsistence food production in high-income countries. By engaging individuals who have lived experience of food insecurity and HWFP skills and knowledge, novel policies and programs can address barriers to these strategies for a broader group of people. In doing so, food security and the many other psychosocial benefits of HWFP may be realized.

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Author contributions JA: study design, data collection, analysis, writing – original draft, project management. SB: study design, data collection, analysis, writing – original draft. RES: study design, data collection, analysis, writing – original draft, project management, funding acquisition. SA: writing - review and editing. RCM: study design, writing - review and editing, project management. SCM: study design, writing - review and editing, funding acquisition. KY: study design, writing - review and editing, funding acquisition. SAN: study design, writing - review and editing. JL: study design, writing - review and editing, funding acquisition. MTN: study design, writing - review and editing, project management, funding acquisition. All authors have read and agreed to the published version of the manuscript.

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Data availability The data generated and analyzed in the current study are not publicly available because they contain information that could compromise participants' confidentiality. De-identified excerpts supporting the findings are included in the article.

Declarations

Ethical approval The study protocol was approved by the Institutional Review Board of the University of Maine (protocol no. 2020–07-11) and by the University of Vermont Committee on Human Research in the Behavioral and Social Sciences (protocol no. 000000873). The procedures used in this study adhere to the tenets of the Declaration of Helsinki.

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