

# A Peer Mentoring and Wellness Approach for Workplace Safety in the Mezcal Industry

Dadras, M., Hyppolite, P., McNeil, B., & Slocum, S.

Virginia Tech - Blacksburg

This peer mentorship model is designed to enhance occupational health and safety for mezcal workers in Oaxaca, Mexico. Rooted in the *'Siempre Amarás'* philosophy of Mezcal Amarás—which emphasizes care for the land, environment, and community—this program empowers experienced workers to mentor colleagues. The goal is to reduce workplace accidents and injuries while promoting holistic wellness. This initiative addresses key risks, such as fire hazards, heat stress, and musculoskeletal injuries, by integrating traditional practices with evidence-based wellness strategies tailored to the mezcal industry. Mentors receive targeted training in hazard recognition, stress management, and participatory safety methods, equipping them to serve as champions of wellness through advocacy, education, and modeling healthy behaviors. They facilitate regular safety briefings, advocate for workplace improvements, and promote wellness practices. The peer-to-peer mentorship structure fosters trust and open communication, encouraging employees to discuss safety concerns more openly, which in turn results in a more comprehensive hazard identification and proactive risk management safety culture. Emphasizing peer support and reciprocal relationships, the approach encourages professional growth and the adoption of positive wellness behaviors. Projected outcomes include a measurable reduction in workplace incidents within a defined implementation period, driven by mentor-led interventions and ongoing evaluation. This mentorship model is adaptable to other industries characterized by labor-intensive work conditions, including agriculture and construction. Practical implementation tools, such as a competency framework and evaluation metrics are provided to support organizations in sustaining wellness initiatives and implementing structural changes. Ultimately, this approach aims to promote safer work environments, enhance employee health outcomes, and foster a culture of continuous improvement in occupational wellness.

*Keywords:* Cultural adaptation, Mezcal industry, occupational health and safety, peer mentoring, sustainability

*Acknowledgements:* We gratefully acknowledge the Environmental Health and Safety (EHS) Department at Virginia Tech for providing financial support, workplace safety resources, and expert guidance essential to this project. We also thank the Executive Master of Natural Resources (XMNR) Program and faculty at Virginia Tech for their departmental leadership and for facilitating the global study abroad experience in Oaxaca, Mexico, which contributed invaluable cross-cultural insights and project development support. Special appreciation is extended to Juan Mayorga and Laura Montesi for sharing critical cultural perspectives, and to Mezcal Amarás for their openness to collaboration, willingness to embrace innovative safety initiatives, and commitment to an ongoing partnership for evaluating the impact of these interventions.

## Introduction

Peer mentorship has the potential to significantly enhance occupational health and safety (OH&S) in hazardous work environments. This paper explores the integration of a culturally responsive mentorship model within the mezcal production industry in Oaxaca, Mexico—an industry deeply

rooted in tradition and community values. Cultural norms surrounding leadership, authority, and interpersonal relationships—particularly within the socially complex Oaxacan community—can profoundly influence the effectiveness of mentor-mentee relationships. Recognizing and respecting these cultural dynamics is essential for fostering trust, clarity, and mutual growth. By promoting

cultural awareness, the mentorship process can shift power dynamics in a way that supports both personal and professional development. These shifts contribute to improved leadership, enhanced safety practices, and greater emotional resilience among workers. The proposed model draws inspiration from Mezcal Amarás' guiding philosophy, *Siempre Amarás*, and their demonstrated commitment to community empowerment—particularly through mentoring and training for aspiring mezcateros and agave cultivators (Casa Amarás, 2021). This provides a strong foundation for expanding the vision through structured peer mentorship by integrating complex social theories that strengthen not only the mentor-mentee relationship but also enhance the capacity for innovative research and implementation. To guide the development of this model, participatory action research (PAR) unites researchers and participants collaboratively to co-identify problems and/or hazards, co-develop solutions, and co-implement changes; a methodology that naturally engages the workplace (Baum et al., 2006). To deepen this participatory process, the communities of practice (CoP) theoretical framework developed by Erienne Wenger, can be beneficial. This framework identifies groups of individuals with similar concerns and passions, allowing them to learn through shared practice and sustained interactions that share common goals (Wenger, 1998). Together, these frameworks support a mentorship structure that empowers workers to identify hazards, co-create solutions, and implement meaningful changes within their workplace and communities. This peer mentoring program was developed to introduce foundational OH&S practices into the mezcal industry, leveraging the leadership and cultural capital of Mezcal Amarás. While the company demonstrates a strong commitment to sustainability and community wellbeing, formal OH&S systems—such as hazard recognition protocols, incident tracking, and structured wellness training—are not stringently enforced. As a result, employees may be unfamiliar with the concepts and expectations typically associated with OH&S frameworks. To address this gap in a culturally relevant and participatory way, the program is grounded in principles of collective wellness.

## Literature Review

Mentorship models have been increasingly applied across diverse professional contexts, creating “a developmental relationship that involves a more experienced or more knowledgeable person helping a less experienced or less knowledgeable person to achieve their goals” (Mullen & Klimaitis, 2019). This model has enormous educational, personal, and professional developmental potential (Hansford et al., 2002), furthermore ‘peer mentoring’ references the “reciprocal relationship that fosters the development of skills, knowledge,

potentials, and competencies, benefiting all parties involved” (Le et al., 2024). Peer mentoring relationships hold prolific ‘psychosocial functions’ that can be observed in four phases: *initiation*, *cultivation*, *separation*, and *redefinition* (Kram, 1985). Each of these phases reintroduces opportunities for analyzing cultural relevance, professional and personal impact, motivation, and other factors. *Initiation* involves the creation of the relationship; more may fall on the organization here in identifying natural and conscious leaders, thus creating an introductory opportunity with mentees for integration. *Cultivation* refers to the role of the mentor in supporting the career and psychosocial development of the mentee. *Separation* and *redefinition* focus on the supported and independent transition of the mentee towards peer roles within the organization.

## Benefits

The benefits of this potential cascade down through respective organizations, improving intra- and interpersonal relationships, which in turn strengthen general knowledge transfer, trust, performance, productivity, efficiency, and leadership development (Eby et al., 2008; Talentsy, 2024). The ability for workers to have freedom in this way encourages an environment that fosters open communication and promotes learning, allowing businesses to continue adapting in a fast-paced landscape. The mezcal industry offers a unique opportunity to observe this increased economic capacity through leveraging mentor-mentee benefits, such as creativity, relationship building, or increased motivation.

### Benefits for Mentors

Integrating a formal mentorship program empowers mentors by enhancing their soft skills such as communication and empathy, which are valuable across industries (Ehrich et al., 2004). Mentors increase their connections within communities and gain knowledge as they guide others in safety initiatives (Kram, 1985). This shared experience helps improve leadership skills, job satisfaction, confidence, performance, and personal growth (Eby et al., 2008), ultimately contributing to a supportive and collaborative organizational culture.

### Benefits for Mentees

Peer mentoring provides a trusting and supportive environment, empowering the mentee to be an active member of safety hazard recognition and reporting (Zimmerman, 1995). Overall wellbeing and job satisfaction are enhanced because physical and mental health concerns are addressed within the program, improving overall employee morale (Le et al., 2024). Mentees acquire skills that foster their own leadership and career

development, preparing them for future leadership roles (Le et al., 2024; Wenger, 1998). This personal growth mindset improves workplace conditions, fostering the cycle of growth and leadership in the face of unique cultural challenges, such as those encountered in the mezcal industry.

### **Benefits for Organizations**

The 'symbiosis' that is the mentor-mentee relationship establishes an internal structure within the organization that possibly eliminates dangerous power dynamics coming from 'top-down' leadership cultures. Applied loyalty, tacit knowledge, communicative properties, and other informal characteristics are directly traceable to the influence that the mentor-mentee relationship has on its elements (Ehrich et al., 2004; Smith, 2018). Organizations can discover the capacity for further cultural integration and diverse identity cohesion as the experiences deepen, which can be particularly promising within physically demanding organizations (Eby et al., 2008).

### **Cultural Relevance and Contextual Adaptation**

While mentorship has been widely studied and institutionalized in Western contexts, its relevance and applicability in culturally distinct environments such as Oaxaca- a South Mexican region defined by generational agricultural traditions & communal labor structured from Indigenous practices. Research suggests that although formal mentorship may not consistently be recognized in the same way, meaningful relationships may serve comparable developmental functions (Baker Cervantes & Jiménez, 2023).

Though peer mentoring has demonstrated measurable benefits in industrialized settings, its transferability requires intentional adaptation (Hansford et al., 2002). Programs must be culturally grounded to avoid the risks of misalignment or imposed frameworks. Effective mentorship in these contexts demands a deep engagement with local social norms, relational dynamics, and indigenous knowledge systems to ensure relevance, sustainability, and impact.

While the advantages of mentorship are well established, challenges must also be acknowledged. Common barriers include limited time, lack of clarity around goals, insufficient training, personality conflicts, and trust deficits (Ehrich et al., 2004). For mentors, additional responsibilities may contribute to workload stress or navigating identity-based challenges, such as gender and racial bias, which can also negatively affect the effectiveness and equity of mentor-mentee dynamics (Ragins & Kram, 2007; Talentosy, 2024).

## **METHOD**

### **Mentor Selection and Training**

Mentors are chosen from among experienced

mezcal workers based on their tenure, leadership qualities, and recommendations from both management and peers through a collaborative process. Once selected, mentors undergo a comprehensive training program for recognizing occupational health and safety hazards in the work area. These topics include fire risks, heat stress, musculoskeletal injuries, stress management, ergonomic practices, and the correct use of personal protective equipment (PPE). The training also incorporates cultural competence by emphasizing traditional knowledge-sharing norms and region-specific safety concerns (Baker Cervantes & Jiménez, 2023). This dual emphasis ensures mentors are equipped with both technical expertise and the interpersonal skills necessary for effective peer-led interventions.

### **Mentoring Activities**

After training, mentors actively promote workplace wellness and safety. Their responsibilities include conducting safety briefings, facilitating targeted workshops on identified risks/hazards, and providing peer-to-peer coaching to reinforce PPE use and encourage proactive hazard identification. Mentors also serve as sources of emotional support, fostering trust and psychosocial safety among workers. Open communication is a key priority, creating an environment where employees feel comfortable voicing concerns and participating in shared risk management (Distillery University, n.d.; EHS Today, 2022).

### **Program Structure**

The program's structure is outlined in the Comprehensive Wellness and Safety Proposal for Mezcal Amarás (Dadras et al., 2024) which embeds risk identification and intervention prioritization into daily practice. During *initiation*, mentors and mentees are introduced, and expectations are set, with an early focus on safe practices and risk assessment tools such as the Risk Matrix and Hazard Identification and Risk Assessment (HIRA) (Dadras et al., 2024). The *cultivation* phase centers on collaborative safety inspections, risk assessments, and hands-on training, which fosters skill development and reinforces shared responsibility.

As mentees gain confidence, the *separation* phase allows them to assume greater leadership in safety, with mentors offering guidance as needed. The *redefinition* phase transitions the relationship into a collegial partnership, enabling former mentees to become mentors and perpetuating a cycle of knowledge transfer and continuous improvement. This approach not only improves safety outcomes but also strengthens stakeholder engagement by involving employees at all levels in building a robust safety culture.

The Risk Matrix is a crucial assessment tool for prioritizing potential workplace hazards based on their likelihood of occurrence and level of severity

of their impact on the organization. Mentors and mentees will work together during the risk assessment process to identify immediate needs, allowing for efficient allocation of safety efforts (SafetyCulture, 2024). Table 1. presents a Risk Matrix developed by Prism Engineering (2024), which categorizes the probability and severity

of safety hazards into four risk levels: Low (1-4), Moderate (5-9), High (10-16), and Extreme (20-25). By utilizing this tool, mentors and mentees can systematically prioritize workplace safety concerns, allocate resources more effectively, and mitigate risks in the production process, ultimately enhancing overall occupational health and safety.

**Table 1.**  
*Risk Matrix, (Prism Engineering, 2024)*

Probability / Severity	Minor (1)	Moderate (2)	Major (3)	Severe (4)	Critical (5)
Very Likely (5)	5	10	15	20	25
Likely (4)	4	8	12	16	20
Possible (3)	3	6	9	12	15
Unlikely (2)	2	4	6	8	10
Rare (1)	1	2	3	4	5

The Hazard Identification and Risk Assessment (HIRA) Tool, (ORS Consulting, 2024), is also imperative to the foundation of the mentoring program. It includes a 5-step approach that helps: 1. Identify the hazard, 2. Determine the probability (1-5), 3. Determine the severity (1-5), 4. Calculate

the risk score (Probability x Severity), and 5. Prioritize based on the risk score. Mentors and mentees will partner with the industry's leadership team to develop strategic safety intervention implementation plans. Table 2. Is an example of the HIRA tool created for Mezcal Amaras (Dadras, et al., 2024).

**Table 2.**  
*HIRA Tool for Mezcal Production Example*

Hazard	Probability	Severity	Risk Score	Priority	Proposed Action
Fire hazards	4	5	20	Extreme	Implement fire safety training and provide fire extinguishers
Heat stress	5	3	15	High	Install precision fans, hydration stations, and regular rest breaks
Smoke inhalation	5	3	15	High	Introduce exhaust fans above horno pit ovens
Musculoskeletal injuries	4	3	12	High	Conduct ergonomic assessments and provide training

### Cultural Adaptation

Cultural relevance is ensured through participatory workshops involving mentors, mentees, and administrative staff. These sessions tailor program materials and communication strategies to the stakeholder's customs, values, and languages. Visual tools and facilitation methods are adapted to reflect community norms and maximize accessibility. Feedback mechanisms are embedded throughout both the design and implementation phases, enabling real-time adjustments and long-term sustainability (Baum et al., 2006; Baker Cervantes & Jiménez, 2023).

### Program Objectives and SMART Goals

The program's objectives are structured using

the SMART framework -Specific, Measurable, Achievable, Relevant, and Time-bound as recommended by Art of Mentoring (n.d.), to promote clarity, accountability, and practical goal settings. The specific goal is to reduce workplace incident rates in mezcal production by 20 percent over a 12-months through peer mentoring and wellness-focused interventions. Progress is measured via monthly tracking of incident reports, hazard identifications, and PPE compliance. The goal is achievable by leveraging the expertise of seasoned workers and supporting them with targeted mentor training. The initiative is relevant as it addresses critical health and safety risks, including fire hazards, heat stress, and musculoskeletal injuries. The program is time-bound, with a full implementation and evaluation cycle scheduled over one year, supported by

quarterly progress reviews.

### **Program Monitoring**

A robust monitoring framework underpins the mentoring program to ensure its effectiveness and alignment with the original safety proposal. A baseline assessment is conducted before implementation, gathering data on incident rates, hazard reports, and PPE compliance. Ongoing data collection continues through incident logs, hazard reporting forms, and PPE checklists, enabling continuous tracking of progress and identification of emerging risks (Distillery University, n.d.).

Regular surveys and focus groups assess the effectiveness and cultural fit of programs, ensuring interventions remain relevant and responsive to the needs of the workers (Baker Cervantes & Jiménez, 2023). Structured after-action reviews are conducted at key milestones and at the end of each cycle to evaluate outcomes, share lessons learned, and inform future improvements (Baum et al., 2006). This continuous monitoring process supports evidence-based decision-making and reinforces a proactive safety culture.

Qualitative methods will be utilized to capture the lived experiences and perceptions of those involved in the program. Interviews and focus groups will be conducted with mentors, mentees, and other staff members to explore how the program influences safety culture, communication, and overall workplace wellbeing. Collecting narratives of safety improvements and wellness outcomes will offer rich, contextual insights that quantitative data alone cannot provide (Baker Cervantes & Jiménez, 2023).

### **Results**

As the peer mentoring program has not yet been fully implemented at Mezcal Amarás, the data collection and evaluation framework is designed to ensure that the program's effectiveness can be thoroughly assessed once operational. Specifically, incident and accident rates will be systematically tracked before, during, and after the introduction of the mentoring program. This longitudinal approach will reveal changes in workplace safety over time. In addition, the use of standardized forms to monitor hazard reports and personal protective equipment (PPE) compliance will generate objective data points for analysis. By examining trends in these indicators, it will be possible to determine whether reductions in safety incidents can be attributed to the peer mentoring intervention (Distillery University, n.d.; EHS Today, 2022).

### **Discussion**

A culturally sensitive peer mentoring and wellness approach offers a comprehensive

solution to workplace safety in the mezcal industry by addressing both technical and psychosocial factors. Empowering workers through the integration of traditional knowledge and open communication enhances hazard identification and incident reduction, while also promoting overall wellbeing. Utilizing frameworks such as PAR (Baum et al., 2006) and CoP (Wenger, 1998) encourages shared learning and continuous improvement, the application of SMART goals ensures the program remains focused, measurable, and adaptable to evolving needs (Art of Mentoring, n.d.; EHS Today, 2022). This model not only supports safer practices but also builds a resilient safety culture rooted in collaboration and mutual respect. Further considerations following this work should examine the influence of integrating targeted educational programs between relationships alongside the perceived versus real benefits of the mentoring impact.

Together, these mixed-methods approaches will enable a comprehensive evaluation of the peer mentoring program's effectiveness, by guiding ongoing improvements and supporting organizations' commitment to fostering a safer, more collaborative work environment. Teaching safe practices from the outset and fostering a supportive safety culture, the program ensures that all employees—both new and experienced—are equipped to identify risks, prioritize interventions, and work collaboratively to improve safety outcomes. Ultimately, this model advances organizations' commitment to sustainability, worker wellbeing, and leadership in occupational health and safety.

### **Conclusion**

Peer mentoring, when tailored to an organization's specific cultural and operational context, is a practical and sustainable strategy for enhancing occupational safety and employee wellbeing. In the mezcal industry and beyond, leveraging the experience of seasoned workers and fostering reciprocal relationships has been shown to reduce incidents and empower employees to take ownership of safety practices (Baker Cervantes & Jiménez, 2023; Distillery University, n.d.). The foundational elements of trust, collaboration, and cultural relevance make peer mentoring a versatile model that can be tailored to diverse industries. By co-designing programs with employees, setting clear SMART goals, and engaging in ongoing evaluation, organizations can create safer, more engaged, and resilient workforces, thereby advancing occupational health and safety across all settings (Art of Mentoring, n.d.; Baum et al., 2006). This work contributes by introducing these customizable frameworks into an organization with intense cultural implications and a shared vision for environmental-employee health.

## References

- Art of Mentoring. (n.d.). *Goal setting & measuring the impact of mentoring*. <https://artofmentoring.net/goal-setting-and-measuring-the-impact-of-mentoring/>
- Baker Cervantes, A. S., & Jiménez, T. R. (2023). Exploring how naturally occurring mentorships emerge within a Mexican cultural context. *Journal of Community Psychology, 51*(8), 3385–3402. <https://doi.org/10.1002/jcop.23040>
- Baum, F., MacDougall, C., & Smith, D. (2006). Participatory action research. *Journal of Epidemiology & Community Health, 60*(10), 854–857. <https://doi.org/10.1136/jech.2004.028662>
- Casa Amarás. (2021). *Reporte Casa Amarás 2011–2021: Nuestra filosofía*. [https://cdn.shopify.com/s/files/1/0520/3007/9135/files/Nuestra\\_Filosofia\\_Mezcal\\_Amaras.pdf?v=1671065873](https://cdn.shopify.com/s/files/1/0520/3007/9135/files/Nuestra_Filosofia_Mezcal_Amaras.pdf?v=1671065873)
- Dadras, J., Hyppolite, P. S., McNeil, B., & Looper, J. (2024). *Transforming occupational health and safety in the mezcal industry: A comprehensive wellness and safety proposal for Mezcal Amarás* [Unpublished manuscript]. VirginiaTech. <https://docs.google.com/document/d/1Gwm93QvuOz1-XZX-8hkGXAPzaHEQsr14nIDPFznE5Nk4/edit?tab=t.0>
- Distillery University. (n.d.). *Distillery safety practices and regulatory compliance*. <https://distilleryuniversity.com/distillery-safety-practices-and-regulatory-compliance/>
- Eby, L. T., Allen, T. D., Evans, S. C., Ng, T., & DuBois, D. L. (2008). Does mentoring matter? A multidisciplinary meta-analysis comparing mentored and non-mentored individuals. *Journal of Vocational Behavior, 72*(2), 254–267. <https://doi.org/10.1016/j.jvb.2007.04.005>
- Ehrich, L. C., Hansford, B., & Tennent, L. (2004). Formal mentoring programs in education and other professions: A review of the literature. *Educational Administration Quarterly, 40*(4), 518–540. <https://doi.org/10.1177/0013161x04267118>
- EHS Today. (2022). *How to create an effective safety mentoring program*. <https://www.ehstoday.com/safety-leadership/article/21237831/how-to-create-an-effective-safety-mentoring-program>
- Hansford, B., Tennent, L., & Ehrich, L. C. (2002). Business mentoring: Help or hindrance? *Mentoring & Tutoring: Partnership in Learning, 10*(2), 101–115. <https://doi.org/10.1080/1361126022000002059>
- Kram, K. E. (1985). *Mentoring at work: Developmental relationships in organizational life*. Glenview, IL: Scott Foresman.
- Le, A. D., Sok, P., & Heng, C. T. (2024). Peer mentoring in higher education: A reciprocal approach to academic and personal development. *Education Research International, 2024*, Article 1447398. <https://files.eric.ed.gov/fulltext/EJ1447398.pdf>
- Mullen, C. A., & Klimaitis, C. C. (2019). Defining mentoring: A literature review of issues, types, and applications. *Annals of the New York Academy of Sciences, 1483*(1), 19–35. <https://doi.org/10.1111/nyas.14176>
- ORS Consulting. (2024, July 2). *Hazard identification and risk assessment (HIRA)*. <https://www.ors-consulting.com/hazard-identification-and-risk-assessment-hira>
- Prism Engineering. (2024). *Prism develops a climate resilience assessment tool to support adaptation planning*. <https://www.prismengineering.com/prism-develops-climate-resilience-assessment-tool-to-support-adaptation-planning/>
- Ragins, B. R., & Kram, K. E. (Eds.). (2007). *The handbook of mentoring at work: Theory, research, and practice*. Sage.
- Safety Culture. (2024, January 19). *An introduction to risk assessment tools*. <https://safetyculture.com/topics/risk-assessment/risk-assessment-tools/>
- Talentosy. (2024). *Learning and development culture in Mexico*. <https://talentosy.com/learning-and-development-culture-in-mexico/>
- Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge University Press.
- Zimmerman, B. J. (1995). Self-efficacy and educational development. In A. Bandura (Ed.) *Self-efficacy in changing societies* (pp. 202–231). Cambridge University Press. <https://doi.org/10.1017/CBO9780511527692.009>