Psychological Safety

Survey Flow

Standard: Welcome page (1 Question)

Standard: Screening Questions (2 Questions)

Standard: Demographic (6 Questions)

Standard: Project and Team (10 Questions)

Standard: Measuring psychological safety (1 Question)

Standard: Antecedents of Psychological Safety - Leadership (5 Questions)

Standard: Antecedents of Psychological Safety - Team (2 Questions)

Standard: Antecedents of Psychological Safety - Team 2 (2 Questions)

Standard: Antecedents of Psychological Safety - Leadership and Team (1 Question)

Standard: Antecedents of Psychological Safety - Individuals 1 (2 Questions)

Standard: Effect of Psychological Safety (8 Questions)

Standard: Moderating variables (5 Questions)

Page Break

Start of Block: Welcome page

WP

Thanks for taking time to participate in our survey. You have either participated on the prescreening or on the pilot versions of this survey. You have been invited to participate because you meet the study criteria. Please, answer every question carefully.

In this research project, we aim at understanding agile teams approaches to admitting mistakes, taking initiatives, talking about problems, and helping each other and how doing so contributes to achieving software quality. Your participation is anonymous, and the survey should take 20 mins to complete.

This research project is led by Adam Alami, assistant professor at Aalborg University, Denmark, in collaboration with Mansooreh Zahedi, assistant professor at the University of Melbourne and Oliver Krancher, associate professor at the IT University of Copenhagen, Denmark.

Your data will be used to carry out research for scholarly publication. As part of the publication process, the data will be shared in anonymized form, which does not reveal the identity of the survey participants and their organisations.

We thank you again for helping us to understand better how agile teams help each others and work collaboratively to achieve better software quality.

Sincerely,							
Adam Alami,	Mansoo	oreh Zah	nedi and C	Oliver Kran	cher		
Page Break -							

End of Block: Welcome page	
Start of Block: Screening Questions	
ProlificID What is your Prolific ID?	
Page Break ————————————————————————————————————	

Location_1 Where are you currently located? ▼ United States ... Other

End of Block: Screening Questions Start of Block: Demographic Age_2 What is your age? O 30 years or younger 31 - 40 years O 41 - 50 years Over 51 years old Gender_3 How do you identify your gender? O Male O Female O Non-binary / third gender O Prefer not to say Prefer to self-describe (please specify below) Page Break —

Role_4 What is your role in your software development team?
○ Software engineer
O Senior software engineer
O Software developers (including Front End, Back End developers, etc.)
○ Tech Lead
○ Solution architect
O Quality assurance engineer
O Quality assurance analyst
○ QA Lead
O DevOps Engineer
O Release Engineer
Other (please specify below)
Page Break

software quality assurance?
O Less than 3 years
○ 3 - 5 years
○ 6 - 8 years
O 9 - 11 years
O More than 12 years
AgileExp_6 How many years of your experience has been in agile teams?
O Less than 3 years
○ 3 - 5 years
○ 6 - 8 years
O 9 - 11 years
O More than 12 years
Page Break ————————————————————————————————————

Education_7 What is your education level?
O Bachelor's degree
O Master's degree
○ PhD
Other (please specify below)
End of Block: Demographic
Start of Block: Project and Team
Team_8 Throughout this survey, we will be asking questions regarding your current team. In all questions, we use "team", "my team" or "our team" to refer to your current team. Please, answer all the questions in the context of your current team. Do you understand this requirement?
O Yes, I understand this requirement
O No, I do not understand this requirement
Page Break ————————————————————————————————————

Agil	eMethod_	9 What agile method do you use in your team?
		Scrum
		XP
		Kanban
		SAFe
		Other (please specify below)
*		
		How many people are usually on your team? (i.e., in average considering team ve and new members come quite often)
200	a Rraak	



			•
			•

MultiFunc_12 To what extent do you agree with the following statement:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
In my team, we have people with all the skills (e.g., front- end, back- end, database, operations, business users) that are required for the project	0		0	0	0
Page Break -					

SoftDev_13 V	Vhat type of product/software do you develop in your team?							
	Custom development							
	Implementation of software packages/COTS							
	Maintenance/enhancement of existing system(s)							
	Other (specify below)							
WorkingToge	ther_14 How long has your team been working together in your current team?							
O Less t	han 1 year							
○ 1 – 2 years								
O 3 – 4 y	○ 3 – 4 years							
O More	than 4 years							
Page Break								

	organisat her organ	tion) or an outsourced software team (i.e., you develop software for client that is is isation)?
		In-house
		Outsourced
		Other (specify below)
	cated_16 e floor)?	How often are the members of your team colocated (i.e., same office or same
(O Always	S
(○ 3-4 da	ys per week
(◯ 1-2 da	ys per week
(C Less ti	han 1 day per week
Multi	pleTeam	s_17 Do you work in a project that involves multiple teams?
(○ No	
(Yes	
Page	e Break	

InHouseOutsource_15 Are you an in-house software team (i.e., you develop software for your

Start of Block: Measuring psychological safety

PS_18 To what extent do you agree with these statements:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
If you make mistakes on my team, is it often held against you	0	0	0	0	0
Members of my team can bring up problems and tough issues	0	0	0	0	0
People on my team sometimes reject others based on the ideas they propose	0	0	0	0	0
It is safe to take a risk (e.g., experiment with a new technology, propose initiatives, raise difficult issues, disclose own knowledge gaps) on my team				0	
I feel comfortable asking my team members for help	0	0	0	0	0
No one on my team would deliberately act in a way that	0	0	0	0	0

my efforts					
Working with members of my team, my unique skills and talents are valued and utilized	0	0	0	0	0
Page Break					

Page Break —

Start of Block: Antecedents of Psychological Safety - Leadership

Leadership_19 To what extent do you agree with these statements:

Our leadership									
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree				
is resolute about psychological safety in our team	0	0	0	0	0				
is determined to promote a work environment where people dare to take risks	0		0	0	0				
accepts that failure can occur when we try out new things	0	0	0	0	0				

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Leadership_20 To what extent do you agree with these statements:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
listens to our needs	0	0	0	0	0
wants to hear about our concerns	\circ	0	\circ	0	\circ
is willing to listen to our suggestions	0	0	0	0	\circ
Page Break —					

Leadership_21 To what extent do you agree with these statements:

Our leadership ...

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
is supportive of us	0	0	0	0	0
provides help with everything we need to deliver our projects	0	0	0	0	0
always treats us with respect	0	0	0	0	0
strongly supports us doing our work	0	0	0	0	0
Dogo Prock					

Leadership_22 To what extent do you agree with these statements:

Our leadership ...

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
"walk the talk" when it comes to taking risk and accepting failure	0	0	0	0	0
"practice what they preach" when it comes to psychological safety	0	0	0	0	0
follows through on the values of psychological safety	0	0	0	0	0
are role models in terms of taking risks and accepting failures	0	0	0	0	0
words are well aligned with their actions when it comes to admitting mistakes	0		0	0	0

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	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I'm passionate about my job. Please, answer "Strongly agree"	0	0	0	0	0
Page Break —					

Start of Block: Antecedents of Psychological Safety - Team

Autonomy_24 To what extent do you agree with these statements:

In our team ...

iii our team	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
we are responsible for deciding how to organize our work	0	0	0	0	0
we decide how to achieve our goals	0	0	0	\circ	0
we make the decisions regarding the technical solutions with no interferences from management or our stakeholders	0		0		
we make the decisions regarding the tasks' estimation	0	0	0	0	0
In our team we are allowed to change our processes in order to improve our performance	0	0	0	0	0
we have the freedom to make decisions on architectural design	0	0	0	0	\circ

decisions, choice of technology and tools									
Page Break -									

DecisionMaking_25 To what extent do you agree with these statements:

In our team ...

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
we engage in constructive discussions to make our decisions	0	0	0	0	0
each team member's voice counts when decisions are made	0	0	0	\circ	0
we make decisions based on the best arguments that team members contribute	0	0	0	0	0
we aim to reach consensus when we make our decisions	0	0	0	0	0

Start of Block: Antecedents of Psychological Safety - Team 2

SlackTime_26 To what extent do you agree with this statement:

In our team, we have ...

·	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
time that we can use for activities beyond developing new functionality (e.g., technical improvements, refactoring, process improvements).		0	0	0	
enough time available to ensure we can meet deadlines even if unexpected problems arise			0	0	
no problems obtaining sufficient time for activities that do not immediately produce customer value (e.g., technical improvements, refactoring, process improvements)				0	
Page Break —					

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SafetyNet_27 Our use of engineering practices (e.g., test automation, continuous integration) ...

				agree	agree
reduces the likelihood that something goes wrong	0	0	0	0	0
gives us the confidence that we can change code without breaking the software	0	0	0	0	0
makes us confident that we notice mistakes before they turn into big problems	0	0	0	0	0

Page Break ———

Start of Block: Antecedents of Psychological Safety - Leadership and Team

NoBlame_28 To what extent do you agree with these statements:

In our team ...

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
we never blame each other for underperforming, instead we coach each other to improve	0	0	0	0	0
we do not blame each other for mistakes but see them as an opportunity for improvement	0			0	0
Our leadership, including team leader and middle management, do not blame individuals for mistakes	0	0			

End of Block: Antecedents of Psychological Safety - Leadership and Team

Start of Block: Antecedents of Psychological Safety - Individuals 1

Openness_29 To what extent do you agree with these statements:

People in our team ...

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
are open to criticism and feedback from their peers	0	0	0	0	0
always welcome new ideas and initiatives put forward by their peers		0	0	0	
do not reject ideas based on the individual who proposed it but based on the strength and the soundness of the idea		0		0	
accept the rejection of new ideas when the rejection is based on strong arguments		0		0	
accept the rejection of ideas when they fail to convince team members with their arguments		0	0	0	

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Page	Brea	k -		 	 	 																			

SpeakingUp_30 To what extent do you agree with these statements:

In my team ...

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
people always raise the concerns they have	0	0	0	0	0
people talk about problems	\circ	0	\circ	0	0
people share their opinions	0	0	0	0	0
people point out quality problems	\circ	0	\circ	0	0

Start of Block: Effect of Psychological Safety

AdmittingMistakes_31 To what extent do you agree with this statement:

<i>g</i>	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Members of my team talk about the mistakes they make related to software quality	0	0	0	0	0
Members of my team do not get blamed by their team members for mistakes related to software quality	0	0		0	
I admit my mistakes related to software quality to my team because there are no repercussions, instead we deal with the situation constructively	0	0		0	
When mistakes related to software quality are admitted by a team member, we deal with the situation constructively		0		0	

*	
AdmittingMistakes_32 What type of mistakes related to software quality have you expeand admitted to your team in the past? Can you share two examples?	erienced
Page Break ————————————————————————————————————	

LearningMistakes_33 To what extent do you agree with this statement:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
As a team, when we admit software quality mistakes, we learn from our mistakes	0	0	0	0	0
Past software quality mistakes usually become a point of reference in our team	0		0	0	0
When past software quality mistakes become a point of reference in our team, we avoid similar mistakes in the future	0		0	0	0

Helping_34 To what extent do you agree with this statement:

In my team ...

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
we find it very important to help each others	0	0	0	0	0
we often help each other on software quality- related issues	0	0	0	\circ	0
we often ask for help from our peers to improve the quality of our code	0	0	0	0	0
we often ask for help from our peers to resolve defects	0	0	0	0	0
we share knowledge related to software quality to help each other to improve the quality of our work when needed	0		0	0	0

ProblemSolving_35 To what extent do you agree with this statement:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
As a team, we collectively solve problems when needed	0	0	0	0	0
When there are tough problems to solve in our team, we analyze them jointly	0	0	0	0	0
As a team, we help each other to solve software quality problems (e.g., resolving defects, making design decisions, coding decisions)					

Casablanca. What is your favorite city?	
○ Paris	
○ Casablanca	
○ Venice	
O New York	
○ Sydney	
Page Break ————————————————————————————————————	

AttentionCheck_36 This is a simple test, when asked about your favorite city you must select

TakingInitiatives_37 To what extent do you agree with this statement:

In my team ...

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
we often propose software quality initiatives	0	0	0	0	0
we often propose software quality-related experiments	0	\circ	0	0	0
we often try out new things to increase software quality	0		0	0	0
prior to experimenting with new ideas, we collectively assess the potential risks to help us decide	0	0	0	0	0
Members of my team often make suggestions for improving software quality	0		0		

End of Block: Effect of Psychological Safety Start of Block: Moderating variables Coaching 39 In your team, how often do you coach each other on software quality related issues? O Never Sometimes About half the time Most of the time Always PairProgramming_40 In your team, how often do you use pair programming to help each other? Never Sometimes About half the time O Most of the time Always Page Break —

Role_41 What is your role in your software development team?
○ Software engineer
O Senior software engineer
O Software developers (including Front End, Back End developers, etc.)
○ Tech Lead
O Solution architect
O Quality assurance engineer
O Quality assurance analyst
O QA Lead
O DevOps Engineer
Release Engineer
Other (please specify below)
Page Break ————————————————————————————————————



ProjectScope_42 Please, briefly describe the scope of the project you are currently w	orking on:
*	
Technologies_43 For software engineers: What programming languages, software development/programming frameworks, and other programming technologies you are using in your team?	e currently
For QAs: What quality assurance processes you are currently using in your team?	