SUPPLEMENTARY MATERIAL 1: INFORMED CONSENT PROCESS DOCUMENTATION

Overview

This supplementary material documents the informed consent process used in the survey. The survey implemented a multi-step consent sequence in which respondents were given the participant information sheet before any questions were asked to confirm they had read it, and separately confirmed age eligibility and voluntary participation.

Item numbering in this document was corrected against the deployed form printout (56 pages, closed 14 March 2026). Q2 is the information sheet confirmation, Q3 the age confirmation and Q4 the voluntary participation checkbox.

Survey welcome page (participant information sheet)

The survey welcome page served as the Participant Information Sheet, presented before any questions. It provided:

- study title and purpose;
- what the study explores (workplace pressures, peer influence, team and organisational culture, psychological wellbeing, role differences);
- eligibility criteria (18+, current or recent work in engineering or related fields);
- data handling and anonymity protections;
- survey duration and closure date (14 March 2026);
- researcher contact information;
- Human Research Ethics Committee contact details.

Information sheet confirmation (Q2)

Q2 asked respondents to confirm they had read the Participant Information Sheet. The item text stated that a "no" response would return the respondent to the front page to read the information before continuing.

What the item did and did not do. This instruction was presented to respondents; it was not enforced by the platform. No skip logic was configured on Q2, and a respondent answering "no" was not automatically returned to the welcome page. Within the consent sequence the survey carried skip logic on Q1 only, where a response indicating the respondent did not work in a qualifying environment exited the survey at the ineligibility section. Q2, Q3 and Q4 carried no branching. The only other item carrying skip logic anywhere in the instrument is the role-routing item, Q20.

Respondents answering "No" at Q2. Four respondents did so. All four then gave consent at Q4 and are included in N = 335.

The consent design should therefore be described as **instructed re-reading**, not automated routing. Respondents were told what to do if they had not read the information

sheet and were free to act on that instruction; the platform did not verify or compel it. The distinction matters because it changes what the design can be claimed to establish: it establishes that respondents were informed and asked to confirm, not that information access was mechanically guaranteed.

Sequence as deployed:

- Welcome page (Participant Information Sheet) — presented to all respondents
- Q1 — eligibility screening [skip logic: ineligible response exits the survey]
- Q2 — "I have read the participation information sheet" [Yes/No; item text advises returning to the front page if "no"; no routing configured]
- Q3 — "I confirm I am 18 years or older" [Yes/No]
- Q4 — "I voluntarily agree to participate in this study" [checkbox: "I agree to participate"]
- Q5 onward — demographics and work context

Multi-step consent process summary

The survey implemented four consent-related steps, numbered here in the order they appear on the form.

Step 1: Information provision - Welcome page displays the Participant Information Sheet. - Covers purpose, eligibility, data handling, duration and contacts. - Presented before any question.

Step 2: Eligibility screening (Q1) - Confirms the respondent currently works in a qualifying environment (the welcome page also admitted those who had worked in one in the past five years). - The only consent item carrying skip logic: an ineligible response exits the survey.

Step 3: Information sheet confirmation (Q2) - Confirms the respondent has read the information sheet. - Item text advises a respondent answering "no" to return to the front page before continuing. - Not enforced by platform routing.

Step 4: Age confirmation (Q3) and voluntary participation (Q4) - Q3 confirms the respondent is 18 years or older [Yes/No]. - Q4 records voluntary agreement to participate [checkbox].

Ethical safeguards

Consent design. Information was provided in full before any question, and confirmation of reading was sought explicitly rather than bundled into a single combined checkbox. Age eligibility and voluntary participation were recorded as separate items rather than inferred. What the design does not provide is a mechanical guarantee that the information sheet was read; that is a limitation of the platform configuration, not a feature of the design, and it is stated here so that the process is not represented as stronger than it was.

Anonymity protection. No identifying information was collected: no names, no email addresses, no organisational identifiers, no IP addresses. Google Forms was configured to disable login requirements and response tracking.

Right to withdraw. Respondents could close the survey at any time without consequence, skip the optional qualitative item (Q101), and decline individual items where N/A options were provided in the role-specific and frequency modules. Because responses were anonymous, a submitted response could not be identified and therefore could not be withdrawn.

Transparency. Data handling procedures were disclosed on the information sheet, covering storage, use, access and anonymity protection.

Implementation notes

Platform configuration. The instrument was built in Google Forms. Section-level skip logic was used for the role-routing variable (Q20) and for eligibility (Q1). No branching was configured on Q2, Q3 or Q4.

Pre-approval testing. The consent sequence was reviewed by engineering practitioners before ethics approval to check that wording was clear, that the information was accessible, and that the sequence did not create undue burden. Responses generated during this phase were not retained or analysed and were permanently deleted. The 52-tester pilot deployment that followed (manuscript Section 4.2) was likewise deleted, and no testing or pilot response is included in the 336 responses received.

Ethics approval. The consent process was approved by the Human Research Ethics Committee (Non-Medical), Universiti Malaysia Sarawak (HREC(NM)/2023 (3)/45). The deployed instrument itself carried the affiliation incorrectly, giving "University of Malaysia" on the welcome page and "Universiti, UniMalaysia Sarawak" on the consent page. Those strings appear in the form printout deposited as Supplementary Material 3, which is the record of what respondents saw and is therefore not corrected. The correct affiliation is Universiti Malaysia Sarawak. The committee reviewed the welcome page content, the multi-step consent sequence, the anonymity protections and the data handling procedures.

Comparison with standard practice

Many online surveys combine consent into a single checkbox covering information, eligibility and agreement together. The present instrument separated these into distinct items: information sheet confirmation, age confirmation and voluntary participation were each recorded independently, and eligibility was screened before them.

This separation makes the consent record more granular and makes each element auditable on its own. It does not, on its own, establish that respondents read the information sheet, and no claim to that effect is made. Designs that route non-confirming respondents back to the information page automatically would provide that additional assurance; this instrument advised the same action but did not enforce it.

Verification

The consent process can be independently verified through:

1. **Survey configuration.** Google Forms settings show login requirements disabled and response tracking off.

2. **Routing logic.** Section navigation can be inspected in the form builder and in the deployed form printout (Supplementary Material 3), which shows skip logic on Q1 and Q20 only.
3. **Item wording and order.** The deployed form printout records Q2 as the information sheet confirmation, Q3 as age confirmation and Q4 as the voluntary participation checkbox.
4. **No test data.** All testing and pilot responses were permanently deleted before data collection began; the reported study begins from a nil baseline.

Conclusion

The consent process provided full information before any question and recorded eligibility, comprehension confirmation, age and voluntary participation as separate items. Its limitation is that the instruction to re-read the information sheet was presented to respondents rather than enforced by platform routing. Documented accurately, the process supports a claim of informed and separately recorded consent; it does not support a claim of mechanically verified information access.