

Are women really better than men at furniture assembly (as IKEA claim)?

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In 2008, Petra Hesser – the then head of flat-pack furniture company IKEA in Germany, now the group’s Global Human Resources Manager – made [headlines](#) by claiming that women are better than men at assembling flat-pack furniture. To a group of psychologists in Norway, this pronouncement was crying out for scientific testing, especially since, if true, it would contradict many years’ worth of [data](#) showing that, on average, men tend to outperform women on spatial skills, which you’d expect would be relevant to furniture construction. For their new study in *Applied Cognitive Psychology*, the researchers based at UiT The Arctic University of Norway have conducted a carefully controlled comparison of men’s and women’s ability to assemble flat-pack furniture. Moreover, they specifically put to the test Hesser’s claim

that women are better than men because they take the time to read the assembly instructions.

Forty men and forty women, all university students, were challenged with constructing IKEA's "Udden" kitchen trolley as quickly and accurately as possible using two different-sized flat screwdrivers, an adjustable wrench, and the hex key that came with the trolley. All participants worked individually on the assembly under the discreet supervision of a researcher. Half had to construct the trolley without instructions (but with an image of the final assembled product); the others had the step-by-step assembly instructions that IKEA provides with the product. The researchers also tested the participants' mental rotation skills (their ability to rotate objects and shapes in their mind's eye), and asked them questions about their experience at furniture construction and other related activities.

The main result? The men were faster and more accurate in their construction of the trolley than the women. In terms of time taken, the men took 22.48 minutes with instructions, on average, and 24.80 mins without, compared with the women taking 23.65 minutes with instructions, on average, and 28.44 minutes without. In terms of construction scores (from 1 to 10 where 10 represents a perfectly built trolley), men averaged 8.9 with instructions, 7.6 without; the women averaged 7.5 with, and 5.7 without. These differences in performance were despite the fact the men and women reported having similar levels of experience with furniture assembly.

Digging into the results, it's clear that women benefited more than men from having instructions (they saved an average of around 4.5 minutes with instructions vs. without, whereas men only speeded up by about a minute). Indeed, the researchers highlight that once you factor out their time spent reading the instructions, the women's performance *with instructions* was almost as good as the men's performance *without instructions*. This observation backs the IKEA manager's claim that women pay more attention to instructions than men, but it doesn't support her additional claim that this

makes them superior at the task.

Related to these points, and consistent with the wider literature, there was a large sex-difference in mental rotation ability, with the male participants significantly outperforming the women on this measure. Interestingly, participants with poorer mental rotation abilities spent more time with the instructions, as if compensating for their weaker spatial skills. When mental rotation ability was factored out of the analysis, there was still a sex difference in time taken to construct the furniture, but the sex difference in the accuracy of the construction disappeared, which certainly suggests that one reason the male participants may have outperformed their female peers is because they tended to have superior mental rotation abilities, likely making them less dependent on the visuals in the instructions.

Looking at the participants' descriptions of their practice at other relevant activities, more sex differences emerged. For example, greater experience at furniture assembly (and with LEGO) correlated with better task performance among the men, but not among the women. Similarly, more experience with finding routes on maps was correlated positively with men's furniture assembly ability, but actually showed an inverse correlation with assembly ability among the women, perhaps the researchers surmised because men and women use different mental processes when way-finding, and only the male approach has knock-on benefits for construction.

This research should not be taken as the final word on men's and women's furniture assembly abilities. Not only was this a small student sample in Norway, meaning we can't necessarily generalise to all men and women, but there are other factors to bear in mind when appraising this kind of research. For example, men are known to be inclined to greater competitiveness than women, so perhaps they were more motivated. Here the wording of the task instructions may have been interpreted rather differently by men and women (the paper simply states that the participants were asked to assemble the furniture as efficiently as possible, with a maximum of 30 minutes allowed).

Likewise, it's well established that people's performance can be undermined by societal stereotypes – such as the widely held belief that (despite the IKEA manager's claim) women usually are not as good at men at DIY or other manual tasks. It would have been useful to know the sex of the researcher who met and timed the participants, which may have exacerbated such effects of “stereotype threat”, but this information is not provided.

The battle of the sexes aside, this research offers up a simple piece of practical advice because both men and women were quicker at construction when they had instructions at their disposal. “Even though the sex difference we found in furniture assembly is the opposite of IKEA's claim, our results attest to the value of IKEA's instructions,” the researchers concluded, “and all furniture providers should make sure that their instructions are well designed. Time spent on good instructions should make furniture assembly less frustrating for both men and women.”



Wiking, S., Brattfjell, M., Iversen, E., Malinowska, K., Mikkelsen, R., Røed, L., & Westgren, J. (2015). Sex Differences in Furniture Assembly Performance: An Experimental Study *Applied Cognitive Psychology* DOI: [10.1002/acp.3182](https://doi.org/10.1002/acp.3182)

Post written by [Christian Jarrett \(@psych_writer\)](#) for the [BPS Research Digest](#).

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