

# **Ergonomic Survey of Household Tasks and Products**

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# Research Questions

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**What** are the most tiring household tasks?

**Why** are these tasks tiring?

**How** do these results compare to the 1937 study by E. Knowles?

- 582 Homemakers from Central New York

- Five Most Tiring Tasks

  - General cleaning

  - Mopping floors

  - Washing

  - Ironing

  - Carrying water

# Research Questions

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Will the most tiring tasks today be different to those found in the Knowles study?

How will ergonomic awareness affect the tasks and products involved with the these tasks?

# Methods

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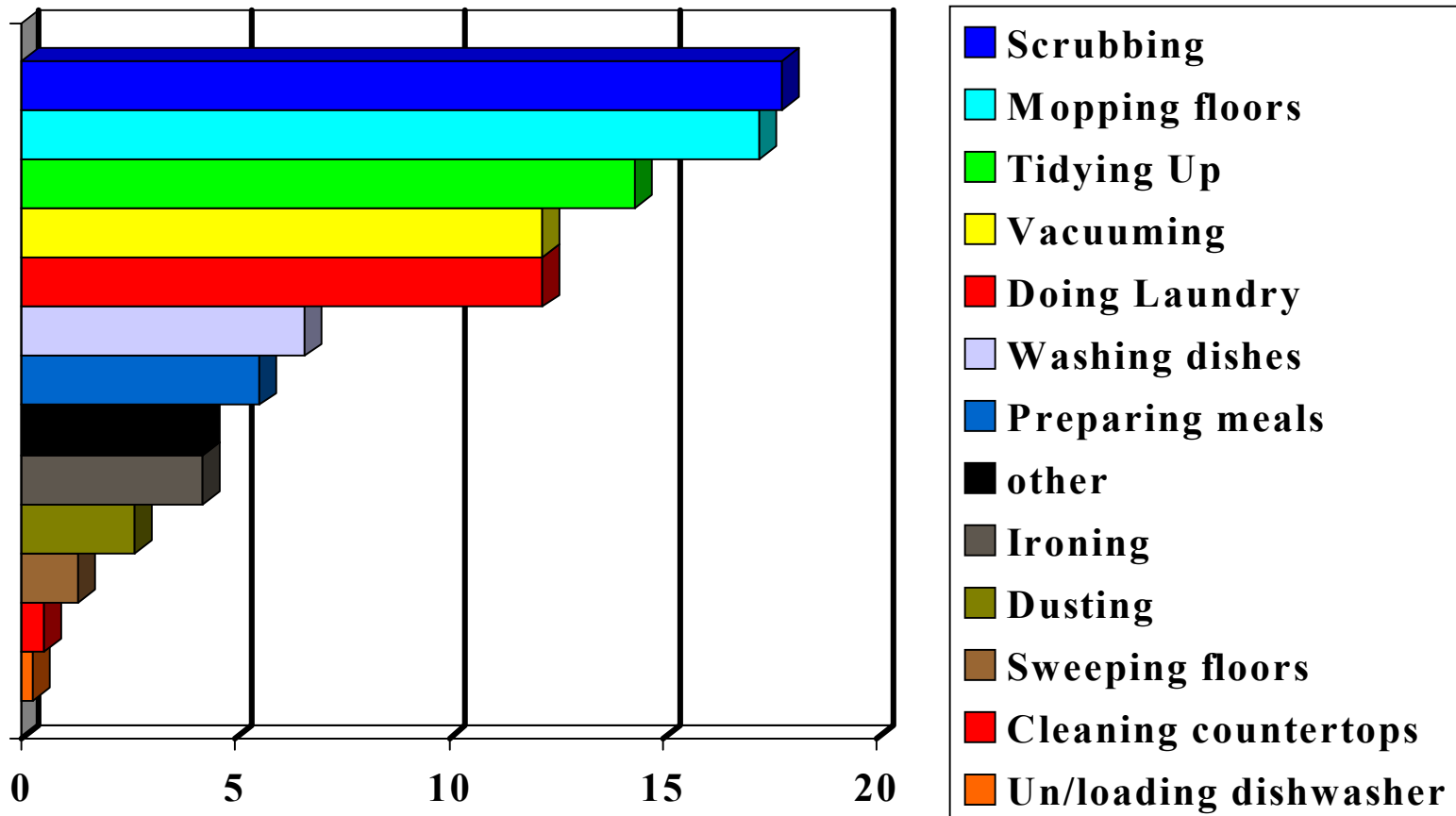
## Subjective Survey

- Web based, self-reported
- Variables include: Age, Gender, Residence, Occupation, Health Status, Number of persons in household, Number of hours spent per task

## Subjects

- chose the most tiring task
- ranked tasks by perceived exertion level

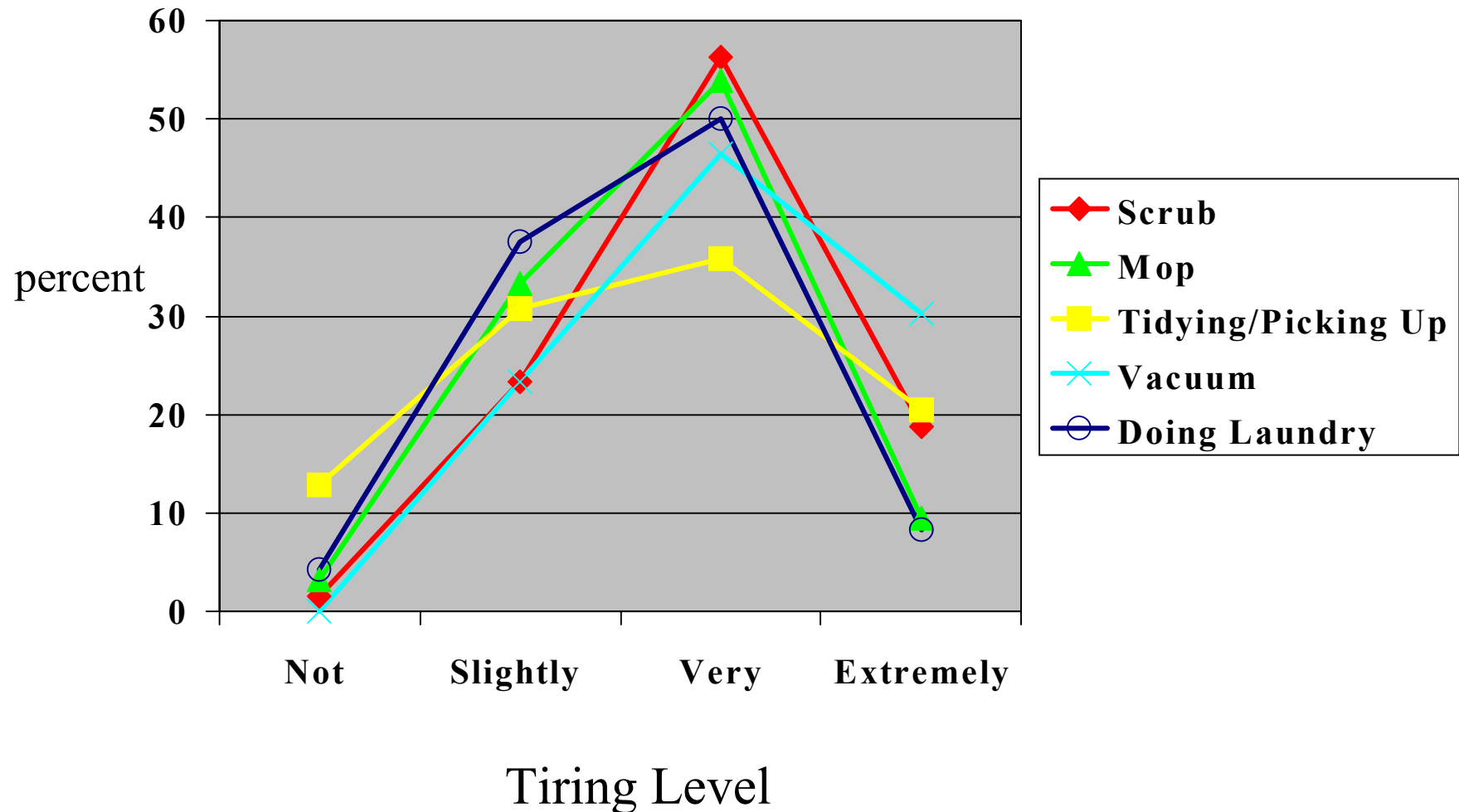
# Most Tiring Tasks



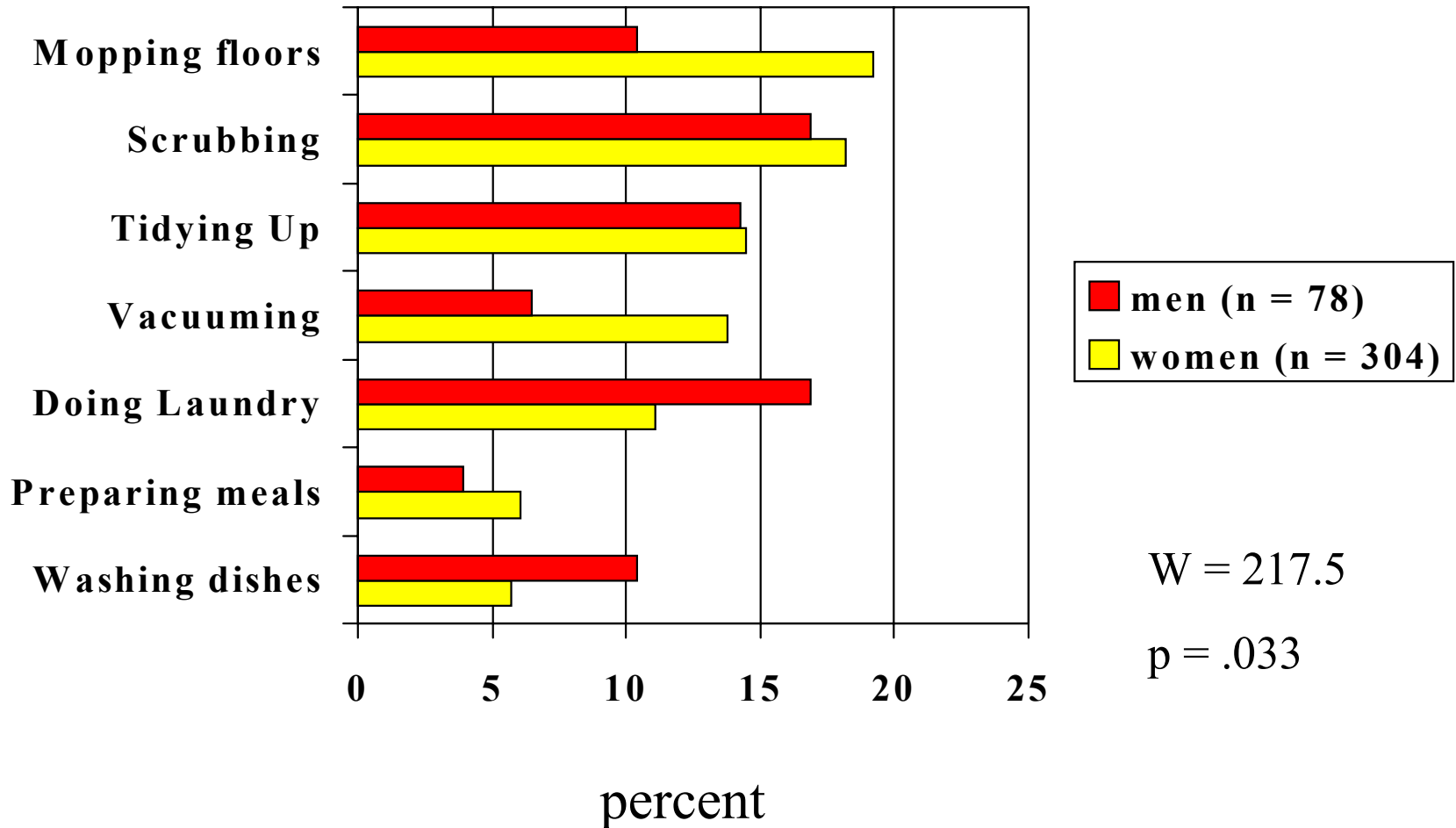
percent

N = 374

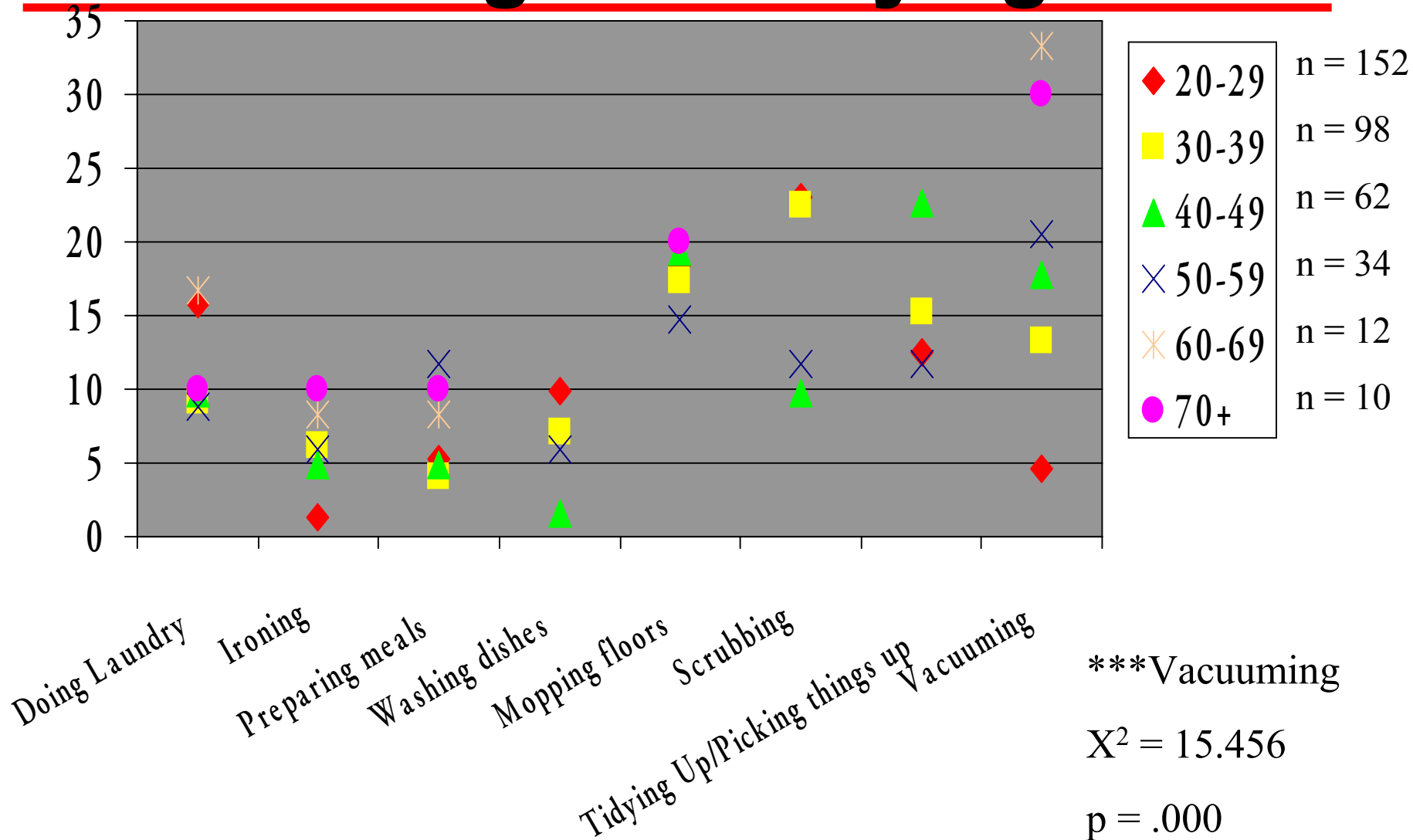
# Ratings of Perceived Exertion for the Five Most Tiring Tasks



# Most Tiring Tasks by Gender

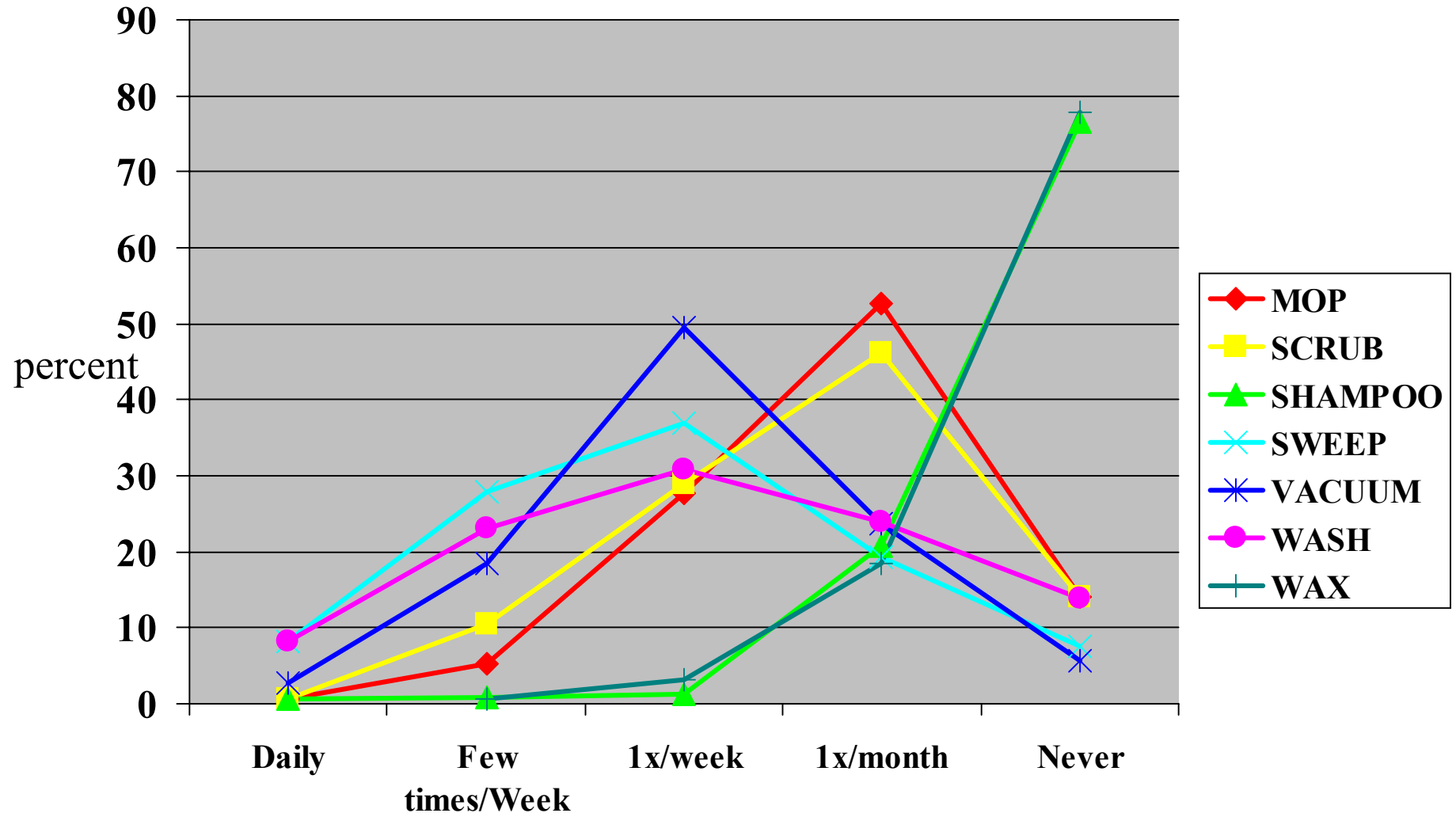


# Most Tiring Tasks by Age

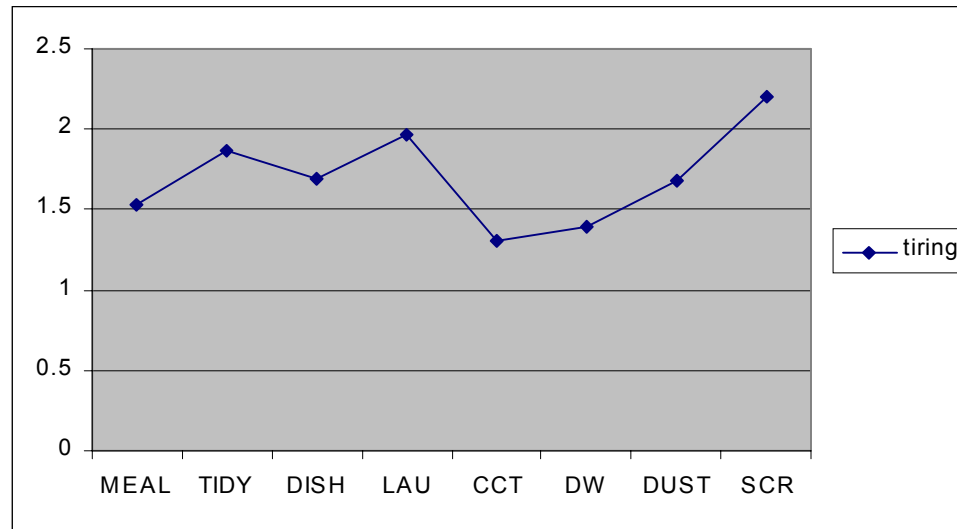
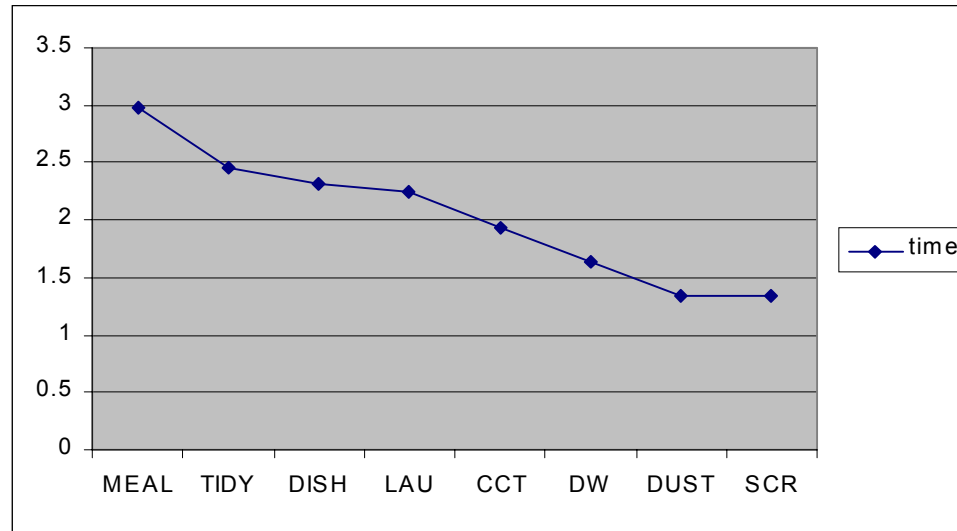




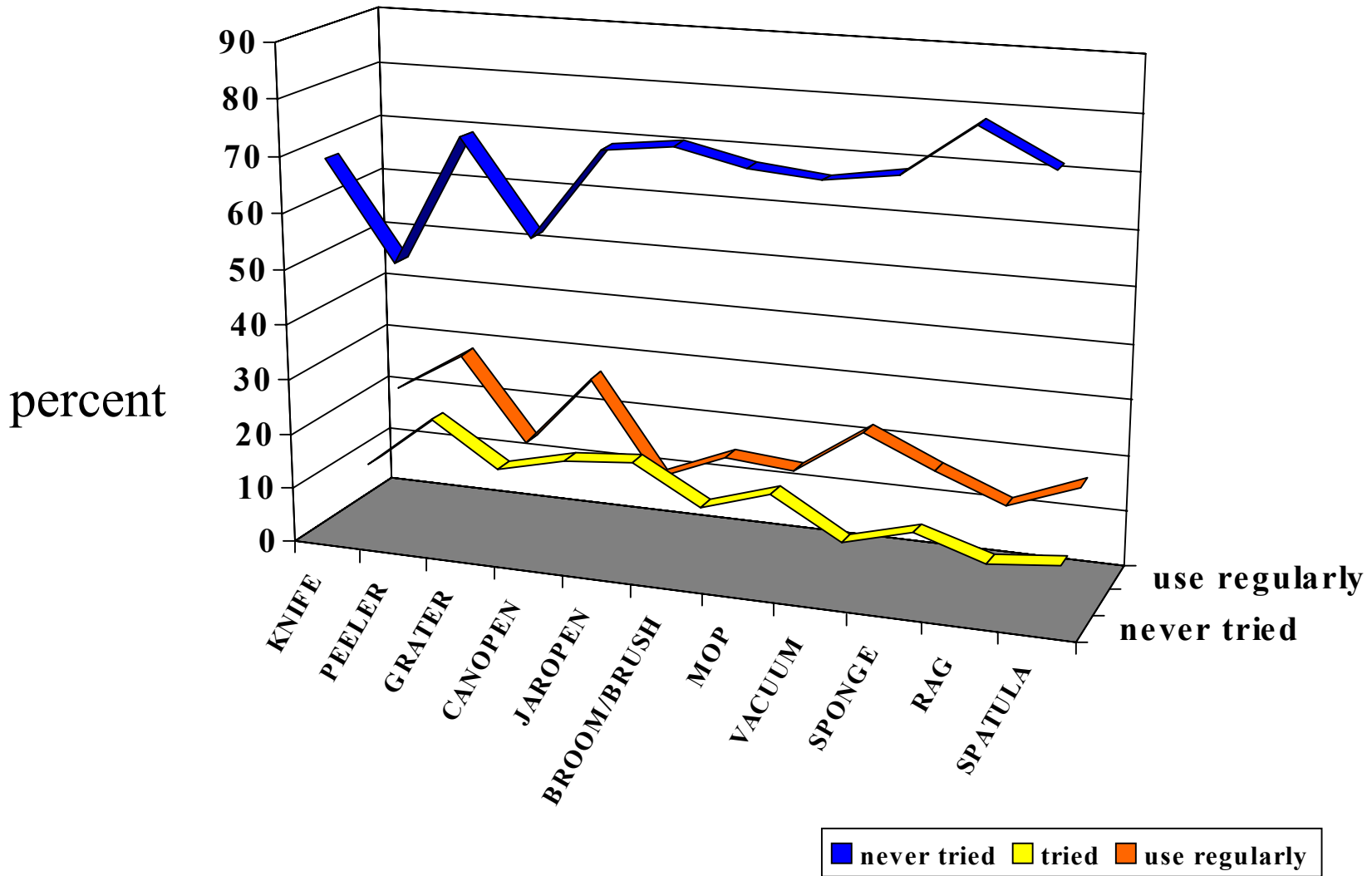
# Frequency of Floor Cleaning



# Tasks Performed Yesterday



# Use of Ergonomic/Timesaving Products



# Summary

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Similarities exist between the two surveys

1937	1999
General cleaning	Scrubbing
Mopping floors	Mopping floors
Washing	Tidying up/Picking things up
Ironing	Vacuuming
Carrying water	Doing Laundry

Floor cleaning is the most tiring aspect of housework.

- Scrubbing and mopping
- Vacuuming

# Summary

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## Age and Gender Differences

- ranking of tasks
- tiring rating of tasks
- time spent on tasks

## Use of ergonomic products

- infrequent
- age differences

# Summary

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## Limitations

- sample demographics
- questions wording/format
- lack of qualitative questions

# Recommendations

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Re-design the process of mopping, scrubbing and vacuuming

- to decrease bending, stretching and effort
- investigate making floors out of easier to clean surfaces
- investigate improving chemical floor cleaners

Increase public awareness about using ergonomic products

- many subjects said "ergonomic" products were not worth the money
- many subjects had not heard of many of the ergonomic products

Enable users to improve their household work environment

- for example put adjustable sinks and countertops in new homes
- place a sliding or foldout surface on the hamper or washing machine to eliminate sorting laundry on the floor