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WOMEN IN INFORMATION TECHNOLOGY PROFESSIONS CAUGHT IN ‘VICIOUS CYCLE’; STRESS UPSETS WORK/FAMILY BALANCE

FAYETTEVILLE, Ark. – It is the “IT” thing – one of the nation’s fastest-growing professions. Why then are women leaving “IT,” the information technology field, in droves? A new study by four UA professors has uncovered previously undocumented reasons why women in the information technology field feel uniquely intense pressures and are leaving the booming profession at such a staggering rate.

Women comprise 46.6 percent of the overall U.S. workforce, but the percentage of women in information technology was 41 percent in 1996 and plunged to 35 percent in 2002. The downward spiral is gaining momentum.

“Women in IT are facing what you call a vicious cycle,” said Deb Armstrong, assistant professor of information systems, who co-authored the study with professors Myria Allen, communication; Margaret Reid, political science; and Cynthia Riemenschneider, information systems.

“We found three loops, which are circular relations between managing family responsibilities and the increasing need for a flexible work schedule, which then causes more stress at work, which then impacts the family and the scheduling needs. Each loop is its own vicious cycle.”
The study found a type of feedback loop unique to women in the IT profession that differs from the traditional reciprocal two-way relationship between work and family in most professions. The very job qualities that are desirable to IT workers cause work stress, which adds to the challenge of managing family responsibilities.

“Some of the qualities IT folks crave in a job, such as challenge and learning, are causing more stress,” said Armstrong. “It’s very important to women to have a challenging job where they’re performing well, as well as flexibility. We have to understand there’s a whole system, a cycle, at work here, not just the reciprocal relationship between only work and family.”


Armstrong et al conducted focus groups with female IT professionals at a Fortune 500 company. Using a methodology known as revealed causal mapping, they developed a mental model for the knowledge structures of the women.

“This means we developed a map of what issues women think are important (as expressed through their comments) and how these issues all fit together,” explained communications professor and co-author Myria Allen. “For example, women indicated the work-family relationship was important to them and through what they said this work-family relationship seems to be related to how they feel about the flexibility they experience in their workplace.”

The women were asked questions regarding what they perceived as barriers to promotion and their challenges at work.

“What’s interesting is that what came out were issues surrounding work and family,” Armstrong recounted.

“We identified the cause and effect relationships within the women’s cognitions surrounding these issues, such as: ‘When I have to work late it’s stressful and causes problems with my family.’”

The research confirmed previous findings about stress being caused by the interaction between managing work and family, but revealed two additional components to the traditional work-family conflict. For women in information technology, the work-family conflict has three elements: A cyclic (as opposed to reciprocal) nature of the work-family balance, the importance of particular IT job qualities (e.g., project orientation) and the importance of a flexible work
schedule. For women in information technology, the work-family conflict has three intertwined elements: the work-family balance, the importance of particular IT job qualities (e.g., project orientation) and the importance of a flexible work schedule. “This work schedule flexibility is more of a control issue,” said Armstrong. “Some of these women had very ad hoc flex-time or a reduced schedule, but it is stressful if they feel they can’t control their schedule.”

Studies have indicated individuals in information technology have a high need for challenging work and a lower need for social interaction, and are more ambitious than the average population. They constantly are being challenged by rapid technological change and the speed with which technical skills become obsolete.

Armstrong and her colleagues are already working on a follow up research project aimed at confirming these findings.

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