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Everyday problem solving across the adult life span: solution diversity and efficacy

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Abstract

Everyday problem solving involves examining the solutions that individuals generate when faced with problems that take place in their everyday experiences. Problems can range from medication adherence and meal preparation to disagreeing with a physician over a recommended medical procedure or compromising with extended family members over where to host Thanksgiving dinner. Across the life span, research has demonstrated divergent patterns of change in performance based on the type of everyday problems used as well as based on the way that problem-solving efficacy is operationally defined. Advancing age is associated with worsening performance when tasks involve single-solution or fluency-based definitions of effectiveness. However, when efficacy is defined in terms of the diversity of strategies used, as well as by the social and emotional impact of solution choice on the individual, performance is remarkably stable and sometimes even improves in the latter half of life. This article discusses how both of these approaches to everyday problem solving inform research on the influence that aging has on everyday functioning.

Keywords

everyday problem solving; aging; coping; practical intelligence; decision making

Introduction

As mentioned in many chapters in this review volume, a common theme of the cognitive aging literature is a steady decline in functioning. As we get older, we experience changes in processing speed,^{1–3} memory,⁴ reasoning,⁵ attention,^{6,7} and executive functioning.^{8–10} Underlying such decline is a series of structural changes in the brain^{11,12} as well as shifts in what motivates us to think and act as we grow older.^{13–15} Despite these declines, older adults are often autonomous, independent, and well adjusted. They live full lives and occupy as many roles in society as younger individuals, if not more roles, and they are relied upon as authority figures—leaders, advisors, employers, parents, and grandparents. This divergence between declines in lab-assessed cognitive functioning and maintained interpersonal influence is what fuels research on everyday problem solving across the adult half of the life span.^{16,17} The need to assess everyday functioning independently of traditional measures of primary mental abilities led to the creation of everyday problem solving batteries that displayed higher levels of ecological validity, more closely resembling

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challenges that are part of our day-to-day existence. Research in this field focuses on defining the conditions under which older adults may have difficulties with these problems (e.g., physical limitations and comprehension of sophisticated instructions) so that interventions can be established to ameliorate such difficulties and promote a higher quality of life. In addition, research in this field also focuses on examining how those processes that we use to solve problems change across the adult life span and lead us to implement different types of strategies based upon the goals that we set at each stage of life.^{18,19} Here, research is reviewed that discusses the challenges faced by older individuals when managing everyday problems as well as the differences that have been found in how young and older adults approach the process of solving everyday problems.

Everyday problems are the circumstances that we find ourselves in on a daily basis that involve using the skills, accumulated knowledge, and resources (e.g., time, money, and friends) that we have available to us to reach our goals and to side step obstacles to these goals.¹⁷ Everyday problems vary in terms of their problem space, or the possible solutions that an individual can reach given the contextual features and demands of the situation.¹⁶ Everyday problems sometimes have a clear outcome, or goal state, that all individuals will work toward. For instance, if you return to your automobile at the airport to find that you have a flat tire, the steps that are required to effectively resolve the problem so that you can be on your way are quite clear. Success depends upon your ability to implement these steps (e.g., use of physical strength to remove lug nuts). On the other hand, everyday problems sometimes create obstacles that cannot be directly removed and require a careful balance of knowing not just what to do but when to do it. For example, should you find yourself in a disagreement with your partner on what to give your child as a gift on a birthday, you can each give the child your respective preferred gifts. However, how will you resolve the negativity that emerged as a result of conflicting preferences? What if you have a limited number of resources to devote to a gift and a compromise is necessary to resolve the conflict? If you have to involve others in the problem-solving process, it is challenging to ensure that all parties have the same goals in mind. Moreover, you cannot proceed forward to acquire the gift until you have buy-in from others. When problems are ill-defined, the timing of your actions is important because you may have to refrain from acting until a negotiation can take place. In such a situation, it is important to recognize how to regulate your own emotions and how to influence the emotions and thought processes of others.¹⁸

In this review, how everyday problem solving changes across the adult half of the life span will be discussed. Included is (a) a description of the methods used to assess everyday problem-solving performance and the diversity in findings that emerges when age's impact on everyday problem solving is gauged using well-defined versus ill-defined problems as well as different operational definitions of efficacy, (b) a description of the contextual factors that lead to age differences in everyday problem solving, and (c) a brief assessment of the future directions of the field.

Assessing age differences in everyday problem-solving performance

As mentioned earlier, decades of research on cognitive aging demonstrate gradual decline in functioning over time. This decline, however, runs counter to the notion that with age comes wisdom, or at least an accumulation of experiences that can help us determine how to continue to function when faced with problems. Baltes referred to these divergent trends as multidirectionality, and he believed that two distinct systems of cognition existed to capture these trends: pragmatic knowledge and structural mechanics.²⁰ Accumulated experience or pragmatic knowledge (sometimes called tacit knowledge or crystallized intelligence) continues to grow throughout the life span given the novel circumstances and ever-expanding culture to which we are exposed year by year. Conversely, the hard-wired,

biologically determined mechanisms that support cognition (sometimes called fluid intelligence) slowly degrade as our cells and tissues wear out over time. Key to successful aging is how the change that takes place in these two systems balance against one another.^{21–23} Ultimately, each person has a limited pool of resources to devote to all aspects of their life at any given moment.²⁰ Consequently, throughout the life span, we set goals for ourselves that shape our behavior by prioritizing some pursuits over others. This selection process limits the number of goals that we consider at any given stage of our life so as to make it possible to optimize the investment of our resources to maintain the greatest level of successful functioning as is possible.²⁰ With respect to everyday problem solving, this poses some interesting questions: (a) To what extent does decline in cognitive functioning (especially rooted in one's neural mechanics) affect the resources that are available to individuals in the latter half of life when faced with complex everyday problems that are vital to autonomous functioning, and (b) How does one's changing goals and accumulated experience across the life span influence the process by which we solve problems? These two questions have dominated research on everyday problem solving and aging over the past 25 years.

Consistent with the need to map cognitive decline onto everyday problem solving, many everyday problem-solving tasks consist of a pool of well-defined problems from multiple domains (e.g., nutrition, health, and finance) that reflect the activities that an autonomous individual will engage in when caring for themselves.²⁴ A well-defined problem is a problem that has a constrained problem space (i.e., number of possible responses limited by the features of the question asked) with a single correct solution. For instance, the Everyday Cognition Battery (ECB) includes items that ask participants to compare the nutritional value of two brands of chili.²⁵ Participants are asked to use nutrition labels to determine which brand has less fat and to compare the statistics provided on each label for each of the other listed categories of dietary information. They might also be asked specific questions about what the categories listed on the labels refer to as a way to assess the participants' general knowledge about food labels. Additional items in the battery focus on medication use and understanding financial information. Overall, the problems included in the ECB capture functioning that contributes to many of the domains found in the assessment of Instrumental Activities of Daily Living.²⁶ Studies using this battery or similar tasks with similar well-defined problems demonstrate decline in everyday functioning with advancing age.²⁷ Also, performance on the different components of the battery (e.g., everyday inductive reasoning or everyday knowledge) are significantly correlated with performance on corresponding psychometric tests of intelligence,²⁸ like lab-based assessments of inductive reasoning and verbal knowledge commonly used to track intelligence.²⁹ However, performance on the practical problems included in the ECB better predicts actual everyday functioning than does performance on the standard psychometric tests of intelligence. Overall, well-defined problems are used to trace how age-related cognitive decline affects the specific abilities that are vital to maintaining an individual's autonomy over and above those abilities measured by tests of primary mental abilities.^{24,28,30} Often, researchers who use tasks that include well-defined everyday problems are trying to replicate specific activities from everyday life within the lab to systematically examine where functional deficits may occur. These tasks provide useful information as to which skills might be most affected in an individual,³¹ opening up the possibility for future skills training geared toward forestalling further losses.^{32,33}

In addition to assessing individuals' ability to generate the single correct solution found in each well-defined everyday problem, other researchers assess everyday problem-solving performance by posing ill-defined hypothetical problems and counting the number of safe and effective solutions that can be generated by each participant. In an ill-defined problem, participants are asked to identify all of the ways that they might overcome an obstacle to a

goal to reach an acceptable outcome.^{34,35} The participants' solutions are then examined by coders to ensure that they are in fact safe and effective ways to resolve the problem before being tallied as an indicator of everyday problem-solving ability. A sample problem from such a test might ask the participants to consider ways in which a man with heart problems might still be able to complete summer maintenance and landscaping duties around his house even though his doctor has told him to refrain from strenuous physical activity and even though he does not have enough money to hire someone to do the work for him.³⁶ Researchers use everyday problem-solving assessments that consist of ill-defined problems in order to allow participant-specific experiences to inform the solutions that are generated. For instance, suppose that one is asked to balance a checkbook in a well-defined everyday problem-solving task, this activity requires that the individual demonstrate addition and subtraction skills. If an ill-defined problem involved balancing one's checkbook or managing finances, then recommending the addition of deposits and subtraction of expenditures would be an effective solution. However, recommending that one seek assistance from someone who has experience balancing a checkbook would also be an effective solution. Ultimately, tasks using ill-defined problems have the potential to capture other solutions that a person may find that go beyond the most common strategy for resolving the issue at hand.

From young adulthood until middle age, the fluency of solution generation increases, possibly reflecting the appropriate balance between gains stemming from pragmatic life experience and only minimal structural or neurological decline. However, performance declines slightly in one's 50s and throughout the remainder of one's years.³⁵ Similarly, when social problem solving was examined via ill-defined problems, again an inverted U-shaped function characterized performance, with solution fluency peaking in one's 40s and 50s, and declining thereafter.³⁷ This finding is important because perceived quality of life is closely linked to one's ability to function independently^{38–40} and solve everyday problems that might emerge on occasion^{41,42} that are both linked to mortality.^{43–45} Despite there being numerous studies that link advancing age to declines in everyday problem-solving ability,^{46,47} other studies have identified areas in which we improve in everyday problem solving with age. Studies that do not demonstrate the similar levels of age-related decline in problem-solving performance often rely on an operational definition of problem solving efficacy that differs from a focus on solution fluency (i.e., the number of safe and effective solutions generated). Table 1 includes some of the ways that researchers have defined everyday problem-solving effectiveness.

Everyday problem-solving performance dependent on manner of assessment

What defines success when solving everyday problems? In the aforementioned studies, when faced with a well-defined problem, success was based on whether the participant provided the single best solution. When faced with an ill-defined problem, success was based on the overall number of safe and effective solutions that the individual offered as potential ways of managing the problem. In general, with these definitions of success, advancing age is associated with a decline in everyday problem solving performance.⁴⁶ Although these definitions of effectiveness provide a useful metric for problem solving success, they are not without their limitations. The one-solution definition of success assumes that there may only be one way to solve a well-defined problem and that such problems are generally solved in isolation instead of with the assistance of others or with supplemental information. Additionally, the solution-fluency definition of success assumes that the solutions that are generated reflect the maximum number of solutions accessible to the participants when in actuality they may reflect those solutions that the participants believed to be most relevant to or efficacious for a given problem.

When you examine the actual strategies that young and older individuals use (or recommend) to solve problems, older adults may fare better than expected because the previously mentioned techniques for assessing everyday problem-solving performance underestimate the value of the behaviors evinced by older adults when they are coping with an everyday problem.^{17,18} Specifically, the conventional ways of operationalizing everyday problem solving success fail to account for the quality of individual solutions that are generated. They also do not account for the evolving nature of the everyday problem solving process, including the temporal and environmental limitations on direct action that might be imposed on the problem solver by the problem space. Finally, they ignore the impact that nominated solutions have on the participants' well-being and on their ability to meet the goals that they have set for resolving the problem. Given these limitations, additional definitions of everyday problem-solving success have emerged in order to broaden the scope with which age differences in the everyday problem-solving process are examined.

For instance, Cornelius and Caspi defined everyday problem solving success in terms of the degree to which participants' recommended solutions matched those of an expert panel consisting of developmental psychologists as well as young, middle-aged, and older adult lay people. They asked participants ranging in age from 20 to 78 years to consider 48 hypothetical, ill-defined problems from six domains of everyday functioning (i.e., family, friend, work, home, consumer, and information gathering) included in their Everyday Problem Solving Inventory (EPSI).⁴⁸ Participants indicated the extent to which they might use each of four specific strategies, tailored to each problem, in an attempt to reach a resolution: purposeful action (self-initiated action to directly resolve the problem), cognitive analysis (planning action and thinking about the situation to better understand it), passive-dependent behavior (doing nothing to change the situation or relying on others to step in), and avoidant thinking and denial (distracting one's attention away from the problem, avoiding responsibility for the problem, or denying one's emotions). Other studies conducted at this point in time were also relying on similar coping-based techniques for operationalizing the diversity of problem-solving strategies that may be employed to manage stressors like those in the EPSI.^{49,50} After the participants responded, their recommended strategies were compared to those selected by an expert panel as ideal, and an effectiveness correlation was calculated and examined by age group. Overall, older individuals chose strategies that more closely matched those recommended by the expert panel than did younger age groups. This finding runs counter to previous findings that have been discussed demonstrating that problem-solving ability peaks in mid-life and then declines.

This age-related enhancement in everyday problem solving was later replicated using the same set of problems from the EPSI, parsimoniously redistributing them into achievement-oriented and interpersonal domains.⁵¹ Again, older adults were more effective than young adults in their overall choice of strategies for solving everyday problems. Moreover, older adults were more effective than young adults in choosing strategies to resolve hypothetical social conflicts (e.g., how to react when your peers gossip about one of your closest friends). The major reason for this outcome is that older adults were more likely to implement combinations of strategies that included both problem-focused solutions (e.g., purposeful action) and emotion-focused solutions (avoidance and passive dependence). As had been noted by Blanchard-Fields and her colleagues in prior research, older adults approach everyday problems involving interpersonal conflict in ways that are fundamentally different from young adults and in ways that possibly reflect age-appropriate differences in social motivation and experience that guide older adults to be more mindful of the emotions evoked by problems.^{19,52}

Although older adults are less accurate than young adults when solving well-defined instrumental everyday problems and less fluent when generating solutions for ill-defined

everyday problems in tasks that do not recognize the value of emotion recognition in the problem-solving process,⁴⁶ older adults display a consistent advantage over young adults when problem solving success is defined in terms of one's ability to implement a diverse repertoire of strategies that meet the practical and emotional challenges created by problems.¹⁸ This divergence in outcomes emerges because of the differences that exist in the two dominant approaches to research on everyday problem solving and aging. The method of investigation used, including the operational definition of problem-solving success, influences the conclusions that are drawn about how everyday problem solving performance changes across the adult half of the life span. This can make it quite challenging to compare outcomes across tasks.⁵³ Ultimately, though, each technique seeks to characterize the diversity of solutions offered by the population to manage everyday problems. Errors that individuals make while completing well-defined problems can help inform the research and development conducted by those who design consumer products, financial forms, and even home environments by specifying which parameters need to be changed to promote a more user friendly experience for people of all ages. Additionally, the breadth of emotion-focused coping strategies offered by individuals facing challenging interpersonal conflicts can be used to develop age-specific norms that can inform mental health professionals of those strategies that would be most relevant to patients at different points in their life. In their own ways, each technique strives to add more information to the existing literature on ways that people of all ages can elevate their sense of well-being while continuing to maintain their autonomy and social functioning.

Contextual factors that contribute to age differences in everyday problem solving

Over the past two decades, researchers have recognized that everyday problem solving can be influenced by many person-specific (e.g., sensory abilities and level of cognitive functioning) and age-typical (e.g., communion-oriented goals or time constraints imposed by thoughts about the end of life) contextual factors. Consequently, the literature is replete with examples of studies that attempt to measure the correlational impact of contextual factors on everyday functioning or that directly manipulate context to track how such interventions affect solution quality and strategy preference. These studies are valuable to the field because they inform practitioners (e.g., medical doctors, nurses, rehabilitation therapists, mental health professionals, and financial advisors) about the roles that cognitive ability and personal motivation play in driving adult decision making. Earlier, it was already noted that cognitive functioning predicts everyday problem-solving performance.^{25,28,33} In fact, recent research suggests that individual differences in cognitive functioning mediate the relationship between poor health status and poor everyday problem-solving performance.⁴⁷ Some possible factors that underlie this mediation effect include wide variation (or inconsistency) in response time and age-associated decline in sensory abilities.^{54–56} These findings tie back to Baltes' hypothesis that we become most susceptible to functional deficits in old age when our neurological architecture degrades to the point where we have difficulty implementing the knowledge that we have gained from our past experiences as we cope with current obstacles to our goals.²⁰ Consistent with the idea that our own personal goals and our appraisals of problems matter and shape our choices, other researchers have proceeded forward knowing that, although cognitive ability can factor into everyday problem-solving performance, personal relevance and social context also influence how we solve everyday problems. Figure 1 illustrates the mediating role that social context can have on everyday problem-solving performance.

When faced with a challenge that is not personally meaningful to us, it is reasonable to expect that our feelings of self-efficacy toward our solutions might be less than they would have otherwise been if we were faced with a problem that was more relevant to our own

personal history. This prediction is supported by the work of Artístico *et al.*, who identified that age differences in everyday problem-solving performance map on to the divergent feelings of self-efficacy held by young and older adults when solving problems that either were age relevant or were not relevant to their own age group.^{57,58} Problems that are more relevant to our current stage of life might be easier to resolve because (a) the problem's context may be more familiar to use, (b) solutions to past similar problems are still accessible, and (c) our peers may also be familiar with these problems and could offer instrumental and emotional support. Intuitively, how much personal experience we have with a given problem should predict how successful we are at solving it. However, Berg *et al.* have found that experience with the problem itself matters less in producing age differences in everyday problem solving than does the heuristic-oriented (or experiential-based) reasoning implemented by older adults and not younger adults when completing problem solving tasks.⁵⁹ Specifically, Berg *et al.* demonstrated that older adults may be less motivated than young adults to produce as exhaustive of a list of potential solutions to problems or to consider as much information when generating solutions. This behavioral tendency of older adults has appeared in decision making research over the past 20 years and is discussed throughout this review volume. Ultimately, future research will continue to examine whether this practice is being driven by cognitive decline or by a fundamental shift in the reward structure that motivates decisions in the latter half of life.^{60–62}

The impact that personal relevance has on everyday problem solving may stem from how it facilitates several other appraisal processes that force us to examine the contextual features of problems in more details. Specifically, we have to assess what may be the source of a problem (e.g., domain and cause), our goals for coping with the problem, and the types of solutions that may lead to the best outcomes for the problem. Blanchard-Fields and colleagues have identified that younger and older adults choose similar forms of purposeful action- and planning-oriented strategies (also known as problem-focused strategies) when faced with instrumental problems, or problems that merely present some obstacle to the individual who is trying to achieve some personal goal that does not involve other people or relationships, neither directly nor indirectly.^{18,63} This finding is not surprising given that it is most adaptive to combat the source of the problem directly in these types of situations (e.g., a flat tire on a car or a broken iPod).⁶⁴ Interestingly, younger adults are more likely than older adults to use emotion-focused strategies when faced with instrumental problems.⁶³ This may occur because young people do not have the same personal freedom (e.g., time constraints) and monetary resources at their disposal as older individuals do to invest in clearing obstacles to achievement-oriented problems. If you cannot do something to resolve the problem yourself, you may have to depend on others for assistance. Consequently, passive dependence or attempts to avoid or deny the existence of the obstacle can be an effective way to reduce the disappointment or frustration that one experiences when a goal is thwarted.¹⁸ Developmentally, we would expect young and older adults to offer different solutions to instrumental problems.

Likewise, when faced with interpersonal problems, we might predict that how one responds may depend upon where they currently fall along the developmental spectrum. Early in life, individuals are focused on gathering information, seeking novel experiences, and meeting new people. In the latter half of life, however, the focus shifts toward investing resources in our current relationships to maintain strong socioemotional bonds.^{15,64} This means that young adults have more social capital to spare and can afford to engage in more argumentative or confrontational strategies for resolving interpersonal problems than can older adults.⁶⁵ Whereas young adults focus on balancing short-term negativity with long-term happiness, older adults are focused on being happy today. Simply put, older adults are more likely than young adults to focus on strategies that squelch those negative emotions that are toxic or threaten relationships because they do not have as much time left in life to

enjoy these relationships.^{15,18} For example, in a seminal paper in everyday problem solving and aging, Blanchard-Fields and colleagues found that older adults were more likely than young adults to engage in avoidant-denial strategies when faced with interpersonal problems that were emotionally evocative.⁶⁶ Older adults appear to be more keenly aware of when it is important to step away from a conflict to cool off and when it is valuable to delay reacting so as to avoid fanning the flames.^{52,67} Consistent with this interpretation, older adults have been found to experience less anger during interpersonal conflicts.^{68,69} More-over, from middle adulthood through old age, there is a greater emphasis placed on secondary control striving, or the need to internally regulate our reactivity to an environment that might fall outside of our control.⁷⁰ With respect to interpersonal everyday problems, the latter half of life is when we realize that attempting to change the behaviors of others might be counterproductive because doing so might exacerbate conflict. A substantial component of this is recognizing that interpersonal harmony requires working within the boundaries of relationships and considering the mutual goals that we have with our relationship partners.

Future directions

The research reviewed up to this point has highlighted how the methods used to assess everyday problem solving contribute to age differences in everyday problem solving performance. It has also presented some of the factors that are responsible for eliciting age differences in strategy selection when researchers focus on the dynamics of how young and older adults react to everyday problems. With the emergence of socioemotional selectivity theory in cognitive aging, there has been a renewed focus on the role that age differences in goals play in motivating everyday decisions.¹⁵ Specifically, an increased emphasis has been placed on trying to gain a deeper understanding of the ways that emotion regulatory and relational communion goals drive older adults' behavioral tendencies when faced with stress or everyday problems. Strough, Berg, and Sansone were among the first to provide evidence that young and older adults approached interpersonal interactions with different goal sets in mind.⁷¹ Their research suggested that older adults were more supportive of social others than were young adults when pursuing the resolution to everyday problems. They interpreted this to suggest that older adults were more focused on generativity, whereas young adults were focused on independence. What is most remarkable about this finding is that, in old age, when individuals face the greatest potential for cognitive and physical decline as well as thwarted instrumental goals, they realign their priorities in order to provide support to their friends and family. Future research in this field will examine how older adults capitalize on their interpersonal focus to live happy and healthy lives.⁷² It will also characterize the relational contexts under which older adults are most at risk for stress or which predispose older adults to health problems.

Emerging from the discussion on how we should define successful everyday problem solving was the recognition that individuals would experience the greatest sense of well-being when they selected problem solving strategies that matched their personal goals for the situation in which they found themselves.^{18,71,73} In other words, if your chosen course of action allowed you to meet your goal for the problem, then you will be successful at resolving that problem. Although shockingly simple in theory, in practice, this perspective creates some challenging methodological and statistical hurdles for the researcher to negotiate. For instance, if you want to assess the match between goals and strategies in real time, you have to collect information on the participant's current goals, carefully distinguishing between short-term interests and longer-term life philosophies. Next, you have to wait for a problem to arise and then track how the participant resolves it. If the problem involves someone else, then you have to determine if there is a match between the goals of both parties involved and then examine the strategies of each individual to see how they contribute to individual and collective goals. Time-sampling studies, which ask people

to report their goals, the obstacles that they experience to their goals, their emotional reactions to such obstacles, as well as the strategies that they are using to manage these obstacles are currently in progress.⁷⁴ Using archival data from a study in which participants ranging in age from 15 to 84 years were asked to discuss a problem from their own lives, Hoppmann, Coats, and Blanchard-Fields found that younger individuals were most likely to match autonomy goals (e.g., independence of action) with self-focused strategies, whereas older adults matched generativity goals with other-focused strategies.⁷⁵ These findings highlight the importance of considering goals when trying to account for why young and older adults may arrive at different resolutions to their problems.

Although numerous studies have examined the types of problem- and emotion-focused coping strategies that young and older adults endorse when faced with everyday problems, few studies have examined the interpersonal interactions that occur between individuals as they collaboratively solve everyday problems. As mentioned earlier, older adults display passive dependent strategies at times during a conflict when action may worsen the negativity experienced by both interaction partners, whereas young adults are willing to be confrontational. For instance, when working with a friend to generate as many solutions as possible to hypothetical interpersonal problems, older adults were more likely than young adults to recommend help seeking and careful planning, whereas young adults were more likely to recommend verbally aggressive self-assertion.⁷⁶ In other words, when collaborating with a friend, older adults are more likely than young adults to agree that interpersonally destructive strategies are not the best way to resolve conflict. This may reflect a shared recognition in the importance of reducing the potential for making the problem worse. Aside from looking at the strategies nominated by collaborators, Berg *et al.* have also examined the ways that collaborators treat one another while working to solve problems. In a study examining how partners in older couples collaboratively coped with prostate cancer, husbands and wives both benefited emotionally from working with one another if they were satisfied with their marriage.⁷⁷ In a second study, middle-aged and older married couples were asked to discuss an ongoing conflict and to also collaborate with one another to complete an instrumental planning task.⁷⁸ Older couples experienced less negative affect during the conflict if they were satisfied with their marriage. However, contrary to the prediction that older couples may behave more passively toward one another during conflict, older couples did express negativity toward one another (especially wives) during the discussion of their conflict. Additionally, when working on the instrumental task, members of older adult couples were warm when attempting to exert control over their partner during the task. When taken together, these findings suggest that jointly reported marital satisfaction can be important for fostering collaborative efforts between partners when coping with health problems, resolving an interpersonal spat, and even when dealing with the daily chores and errands of everyday life.⁷⁹ Future research should continue to examine the dynamic role of partner involvement in everyday problem solving performance to identify which relationship factors are most valuable for predicting long-term health and well-being.

Conclusions

One of the central themes of research examining everyday problem solving across the life span has been to identify the trajectory of change in performance throughout the years as we gain experience and knowledge while simultaneously displaying cognitive and physical declines. The impact of cognitive decline on everyday problem solving is most evident when examining the outcomes of studies that use tasks consisting of well-defined problems. Studies using tasks consisting of ill-defined problems produce mixed evidence of both decline and maintenance, depending on the manner with which problem-solving success is operationally defined. Based on more recent findings, however, it is clear that those

individuals in their latter half of life are motivated by interpersonal factors that are important to young people but just are not prioritized to the same degree. Future research needs to further clarify the role that interpersonal interaction plays in promoting successful everyday problem solving. Outside of the lab environment, older adults continue to make autonomous choices while also working interdependently with members of their social network. Although cognitive and physical decline are inevitable to some degree for all of us, it seems that a shared decision space between close partners may go a long way to promote sustained well-being, physical health, and everyday cognition.

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Figure 1.
Contextual factors that influence solution implementation in everyday problem-solving tasks.

Table 1

Operationalizing effective everyday problem solving

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1. Single, best solution
 2. Total number of safe and effective solutions
 3. Diversity of problem-solving strategies nominated
 4. Correlation between strategies nominated by participants and those recommended by experts
 5. Degree of match between chosen strategy and individual's personal goal
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