Predicting pool safety habits and intentions of Australian parents and carers for their young children

Article *in* Journal of Safety Research · November 2019

DOI: 10.1016/j.jsr.2019.09.006

CITATIONS
0

READS
14

4 authors:

Kyra Hamilton
Griffith University
146 PUBLICATIONS **1,498** CITATIONS
SEE PROFILE

Amy Elizabeth Peden
UNSW Sydney
82 PUBLICATIONS **376** CITATIONS
SEE PROFILE

Stephanie Smith
Griffith University
3 PUBLICATIONS **5** CITATIONS
SEE PROFILE

Martin Hagger
University of California, Merced
470 PUBLICATIONS **15,017** CITATIONS
SEE PROFILE

RUNNING HEAD: Predicting Pool Safety Behaviors

Predicting Pool Safety Habits and Intentions of Australian Parents and Carers for their Young Children

Kyra Hamilton[a,b], Amy E. Peden[c,d], Stephanie Smith [a,], Martin S. Hagger[a,e,f]

[a]School of Applied Psychology and Menzies Health Institute Queensland, Griffith University, Brisbane, Australia.
[b]Laboratory of Self-Regulation and Health Psychology and Behavioural Medicine Research Group, School of Psychology and Speech Pathology, Faculty of Health Sciences, Curtin University, Perth, Australia.
[c]Royal Life Saving Society – Australia, Sydney, Australia.
[d]College of Public Health, Medical and Veterinary Sciences, James Cook University, Townsville, Australia
[e]Psychological Sciences, University of California, Merced, USA
[f]Faculty of Sport and Health Sciences, University of Jyväskylä, Jyväskylä, Finland

Correspondence to: Kyra Hamilton, Health and Psychology Innovations (HaPI) laboratory, School of Applied Psychology, Griffith University, Mt Gravatt Campus, 176 Messines Ridge Road, Mt Gravatt, Queensland, QLD 4122, Australia, email: kyra.hamilton@griffith.edu.au

Acknowledgements. Martin S. Hagger's contribution was supported by a Finland Distinguished Professor (FiDiPro) award (Dnro 1801/31/2105) from Business Finland.

Funding. This project was jointly funded by Royal Life Saving Society – Australia and Royal Life Saving Society – New South Wales. The drowning prevention research of Royal Life Saving Society – Australia is supported by the Australian Government. Royal Life Saving Society – New South Wales received funding for this project from the New South Wales Government under the Water Safety Fund. The sponsor had no role in the design, methods, participant recruitment, data collection, analysis, preparation of this manuscript, or the decision to submit this article for publication.

Competing interests. Author AEP is employed by Royal Life Saving Society – Australia and affiliated with the College of Public Health, Medical and Veterinary Sciences, James Cook University, Townsville, Australia. Data analysis and interpretation of findings was conducted independent of author AEP and Royal Life Saving Society – Australia.

Suggested Citation: Hamilton, K., Peden, A., Smith, S., Hagger, M. S. (2019). Predicting pool safety habits and intentions of Australian parents and carers for their young children. *Journal of Safety Research*.

Abstract

Introduction. Children under five years are most at risk of experiencing fatal and non-fatal drowning. The highest proportion of drowning incidents occur in private swimming pools. Lapses in adult supervision and failures in pool barriers are leading contributory factors for pool drowning in this age group. Methods. We investigated the role of the theory of planned behavior social cognitions (attitude, subjective norm, and perceived behavioral control) as well as perceived barriers, planning, role construction, and anticipated regret on parents' and carers' intentions and habits towards two pool safety behaviors: restricting access and supervising children around private swimming pools. The study adopted a cross-sectional correlational design. Participants (N=509) comprised Australian parents or caregivers with children aged under five years and access to a swimming pool at their residence. Participants completed a battery of self-report measures of social cognitive variables with respect to the swimming pool safety behaviors for their children. Results. Path analytic models controlling for past behavior indicated that subjective norm, planning, anticipated regret, and role construction were important predictors of habit, and subjective norm was a consistent predictor of intentions, for both behaviors. Planning predicted intentions in the restricting access sample, while attitudes, barriers, and role construction also predicted intentions in the supervising sample. Both models controlled for past behavior. Conclusion. Current findings indicate the importance of psychological factors for restricting access and supervising behaviors, with normative factors prominent for both reasoned (intentions) and non-conscious (habits) behavioral antecedents. It seems factors guiding restricting access, which likely require regular enactment of routine behaviors (e.g., ensuring gate is not propped open, pool fence meets standards), may be governed by more habitual than intentional processes.

Key words: drowning prevention; child injury; habit, intention, theory of planned behavior

Introduction

The World Health Organization (WHO) estimates 372,000 drowning deaths annually,[1] although this is likely underestimated due to the International Classification of Diseases (ICD) codes and methodologies used.[2] Data indicates that children aged under five years are most at risk of unintentional drowning, both fatal and non-fatal.[3-8] In Australia, an average of 28 children under five years drown each year,[9] with the most recent data reporting 29 children under the age of five died from unintentional drowning in 2016/17.[9] A further 199 children under five years are hospitalised each year in Australia due to a non-fatal drowning incident.[10] Private swimming pools (also known as home swimming pools) are the leading location for drowning among children under five years, accounting for 44.8% of fatal drownings among children 0-4 years in Australia in 2016/17.[9] Common factors implicated in child drownings in private swimming pools include lapses in, or complete absence of, adult supervision and non-compliance of safety barriers such as gates deliberately propped open or faulty or poorly maintained pool fences and gates.[5 11]

The strategies for preventing child drowning are well understood. For children under five years, the WHO recommends providing safe places, with adequate supervision, away from water, as well as installing barriers controlling access to water, and training bystanders in safe rescue and resuscitation.[12] In Australia, Royal Life Saving Society – Australia's "Keep Watch" program aims to educate parents and carers of children under five years on the risk factors for drowning and strategies to reduce this risk. These strategies include active adult supervision, restricting access to water, and water awareness and resuscitation.[13] However, data indicates that drownings still occur as a result of supervision and restriction behaviors not being upheld by adults for young children. As these behaviors are modifiable,

psychological processes are likely to guide parents' and carers' decisions for engaging in these pool safety behaviors for their young children.

The theory of planned behavior (TPB) [14] is a widely-used decision making model that has been applied to understand health and safety behaviors, including drowning prevention behaviors in general [15-21] and, specifically, pool safety behaviors of parents. [22] The TPB proposes intention as the proximal predictor of behavior, with intention predicted by attitude (overall evaluations of the behavior), subjective norm (perceived social pressure to perform the behavior), and perceived behavioral control (perceived capacity and autonomy to carry out the behavior), with perceived behavioral control further hypothesised to moderate the intention-behavior relationship. Akin to perceived behavioral control is the concept of perceived barriers; however, this construct is usually conceptualised as individuals' confidence to overcome barriers that may hinder behavioral performance. [23] Past behavior is also often included as an additional predictor of intention and behavior in the TPB. Although, in general, meta-analytic studies support the use of the TPB in behavioral prediction, [24] the model does not account for all variance in intentions and behavior. Thus, researchers have investigated other important constructs that may lead to more effective behavioral explanation in specific contexts, such as planning, role construction, and anticipated regret in the context of pool safety behaviors by parents and carers for their young children.

Planning, Role Construction, and Anticipated Regret

Behavioral action is more likely when individuals anticipate detailed plans and develop preparatory strategies for tackling a challenging task. [25] Planning is regarded as a prospective self-regulatory skill where an individual specifies the situational context in which one will enact to ensure behavioral performance is achieved. For example, "If my child is in the pool or around the pool area then I will ignore everthing else and strictly direct all my

attention on supervising their behavior". The context in this case provides the cue that is proposed to trigger the behavior. Plans are therefore not actions and planning requires a mental representation of how to achieve some future outcome that allows the individual to mentally link the intended behavior with a particular context for its enactment, thus connecting the individual with good opportunities to act via a task-facilitating strategy (i.e., specifying when, where, and how to enact a behavior). [25 26] Planning may also include the anticipation of barriers and the generation of alternative behaviors to overcome those, thus protecting individuals' good intentions from anticipated obstacles via a distraction-inhibiting strategy.[27] For example, if a parent anticipates that having a smartphone within reach may divert their attention away from supervising their child, then forming a plan to leave the smartphone somewhere out of reach while supervising their child swimming may prevent lapses in supervising (e.g., *"If I take my child swimming in the pool then I will leave my smartphone inside the house so I will concentrate on supervising my child at all times"*).

Research investigating health behavior decisions for young children has also shown support for the effect of role construction on parental decision making. [28-31] Role construction is conceptualised as the interaction of beliefs about desired child outcomes, responsibility for these outcomes, perceptions of important others, and parental behaviors related to those beliefs and expectations. [32] Thus, the motivational roots of role construction derive from parents considering their responsibilities toward their child and the activities needed to be involved with their child, unlike subjective norm in the TPB where the motivational orientation for action is derived out of significant others' approval. [14] This motivation arises from both self and social verifications to affirm their role as a parent and behave accordingly to fulfil these obligations and remain consistent with the standards attached to the role.

Anticipated regret refers to beliefs about whether or not regret will follow from performing or not performing a certain behavior (i.e., considering the possibility of regret of

supervising or not supervising young children in the pool). [33 34] Conceptually, anticipated regret should motivate behavior because regret is a pervasive, powerful, and unpleasant emotion that people, and in this context parents and carers of young children, wish to avoid. [35] Meta-analytic research has provided support for the inclusion of anticipated regret to the TPB, [36] with anticipated regret adding significantly to the prediction of intention independent of the other TPB constructs. Parents, in general, are aware that failing to supervise or restrict access of their young children around the pool has potentially negative short- and long-term health repercussions, [22] and thus, not performing these behaviors may result in parents experiencing negative emotions associated with anticipated regret.

The Current Study

The aim of this study was to develop a better understanding of the social cognitive factors that underpin the decisions of parents and carers toward two key water-safety behaviors around swimming pools: restricting young children's access to private pools and supervising young children around private pools. The research is expected to provide further formative data that will inform future strategies for the prevention of drowning among this at-risk cohort. Drawing on psychological theories of social cognition, [14 25] we examined intentions as we predict that both these pool safety behaviors may be controlled by reasoned deliberation over the advantages and consequences of the behavior. This process is summarized by parents' and carers' intentions to perform the pool safety behaviors in future. However, it may be that these behaviors are also determined by processes that reflect non-conscious decision making, represented by habits. [37] Intentions reflect the amount of effort an individual is likely to invest in pursuing a target behavior in future[14], whereas self-reported habits reflect the extent to which individuals experience the behavior as enacted beyond their awareness, efficiently and automatically, likely developed through frequent experience with the

behavior in the presence of stable contexts (e.g., private swimming pool area) and cues (e.g., closing gate on entering and exiting pool area).[37 38] In sum, we explored the role of the TPB social cognitions (attitude, subjective norm, and perceived behavioral control) as well as perceived barriers, planning, role construction, and anticipated regret on parents' and carers' intentions and habits to restrict young children's access to private pools and supervise young children around private pools. This research directly links to the Australian Water Safety Strategy 2016-2020's priority goal of reducing drowning among children aged 0-14 years [39] and builds on previous drowning prevention research,[15-21] including research targeting parents' behavior around swimming pools,[22] specifically extending previous research by testing additional social cognitive factors of perceived barriers, planning, role construction, and anticipated regret on processes that reflect both reasoned (intentions) and more non-consciousness (habit) decision making and controlling for parents' past behavior.

Method

Participants

Participants (N = 509, 75% female) were Australian (New south Wales/Australian Capital Territory = 30.5%, Victoria = 24.2%, Queensland = 24.2%, Western Australia = 10.2%, Tasmania = 3.1%, Northern Territory = 0.2%) parents and carers of young children aged 0-4 years. Participants were recruited through Taverner Research, an Australian research panel company, and represented key demographic characteristics relatively proportional to the Australian population. The age of participants ranged from 18-75 years (M = 34.67, SD = 8.76). The majority of participants indicated that they had some form of employment (75.4%) and a greater than high-school-level education (71.7%), most (84.9%) exceeded the 'low income' threshold for annual household income (≤AU$37,000), and most

participants indicated that they had taken their child or children to swimming or water familiarisation lessons (70.7%).

Design and Procedure

A cross-sectional correlational design was used with self-report measures of social cognitive variables (attitudes, subjective norms, perceived behavioral control, intentions, barriers, planning, anticipated regret, role restriction), habit, and past behavior administered concurrently in a single survey administered using the Qualtrics™ online survey tool. Participants were provided with an information sheet outlining study requirements, a consent form, and instructions on how to complete the questionnaires including definitions of the two target behaviors of restricting and supervising (see Table 1). Approval for study procedures was granted prior to data collection from the University Human Research Ethics Committee.

Measures

Study measures were multi-item self-report measures of constructs based on published guidelines and measures used in previous studies. [22 25 28 35 40 41] Participants provided their responses on scales with between four- and seven-point response options. Complete study measures are provided in Table 2.

Social cognitive constructs. Measures of intentions, attitudes, subjective norm, and perceived behavioral control from the theory of planned behavior were developed according to published guidelines. [40] Measures of the perceived barriers, planning, anticipated regret, and role construction were developed according to published guidelines and scales used in research augmenting the theory of planned behavior.[25 28 35] Self-reported habit was measured using the 4-item self-reported behavioral automaticity index [41]. Participants completed two versions of each item, for each of the target behaviors of restricting young children's access to the swimming pool and supervising young children around the swimming pool.

Past behavior. Participants completed a two-item measure of their engagement in the two target pool safety behaviors in the past month.

Demographic variables. Participants self-reported their sex, age in years, employment status (full-time employed, part-time employed, full-time student, part-time student, unemployed), annual household income stratified by seven income levels based on national averages (AU$0-AU$18,200, AU$18,201- AU$37,000, AU$37,001- AU$80,000, AU$80,001- AU$180,000, >AU$180,000), and highest level of formal education in categories (completed junior school, completed senior (high) school, further education diploma, undergraduate degree, postgraduate degree). Participants also reported whether they had taken their child or children to swimming or water familiarisation lessons, operationalized as a binary variable (received lessons, never received lessons).

Data Analysis

As the survey used a forced-response method there were no missing data. Mediation and moderation hypotheses were tested using path analysis with bootstrapped standard errors consistent with Hayes' [42] regression-based approaches. Specifically, we specified direct effects of the social cognitive constructs on intentions and habit, and direct effects of past behavior on all social cognitive constructs, habit, and intentions. We also estimated indirect effects of past behavior on habit and intentions through each of the social cognitive constructs. We controlled for effects of the following demographic variables by freeing paths from each demographic variable to all other model variables: sex, age, income, employment status, highest education level, and received swimming or water familiarization lessons. We computed specific and total indirect effects using the maximum likelihood estimator with 1000 bootstrap replications. Goodness of fit of the models with the data were evaluated using multiple criteria comparing the proposed model with the baseline model including the goodness-of-fit chi-square (χ^2), the comparative fit index (CFI), the Tucker-Lewis index

(TLI), the standardized root mean-squared of the residuals (SRMR), and the root mean square error of approximation (RMSEA) and its 90% confidence interval (90% CI). To indicate fit of the model, the chi-square should return a non-significant result, values for the CFI and TLI should exceed .95, values for the SRMR should be less than or equal to .08, and values for the RMSEA should be below .05 with a narrow 90% confidence interval [43]. Models were estimated using the lavaan package in R [44]. Data files and analysis scripts and supplemental materials are available online from the Open Science Framework project for this article: https://osf.io/gwjqn/?view_only=581113b67a234f4f95410bbc5e9db994

Results

Descriptive statistics, alpha reliability coefficients, and intercorrelations among study variables are presented in Table 3. Based on the binary coded variables, The path analytic model for restricting (χ^2 (7) = 13.755, p = .056; CFI = .998; TLI = .978; SRMR = .014; RMSEA = .044, 90% CI = .000, .077) and supervising (χ^2 (7) = 11.367, p = .123; CFI = .999; TLI = .986; SRMR = .012, RMSEA = .035, 90% CI = .000, .071) pool safety behaviors exhibited adequate goodness-of-fit statistics. Statistically significant parameter estimates for the restricting and supervising behaviors are presented in Figures 1 and 2, respectively. Full results of the path analytic models for each behavior including unstandardized and standardized parameter estimates, confidence intervals, and test statistics for direct, indirect, and total effects are presented in Table 4.

Focusing on the model for restricting behaviors, we found statistically significant effects of subjective norm, planning, anticipated regret, role construction, and past behavior on habit. Subjective norm and planning were significant predictors of intentions. Past behavior was a significant predictor of all constructs in the model, with the exception of intentions. We also observed significant indirect effects of past behavior on habit through subjective norm, planning, anticipated regret, and role construction. There were also

significant indirect effects of past behavior on intentions through subjective norm and planning. Overall, there were significant total indirect effects of past behavior on habit and intentions, but there was also a significant direct effect of past behavior on habit. The mediation proportion statistic (P_M) indicated that the indirect effect accounted for a modest proportion of the total effect of past behavior on habit ($P_M = .251$), suggesting that the substantive proportion of the effect of past behavior on habit is accounted for by the social cognitive constructs [45].

Turning to the model for supervising behaviors, we found statistically significant direct effects of subjective norm, barriers, planning, anticipated regret, and role construction on habit. In addition, there were significant effects of attitude, subjective norm, barriers, role construction, and past behavior on intention. Past behavior was a significant predictor of all model constructs, with the exception of habit. There were significant indirect effects of past behavior on habit through subjective norm, barriers, planning, anticipated regret, and role construction. We also found significant effects of past behavior on intention through attitude, subjective norm, barriers, and role construction. There were significant total indirect effects of past behavior on habit and intention, as well as a direct effect of past behavior on intention. The direct effect of past behavior on intention only accounted for a modest proportion of the total effect ($P_M = .205$).

Overall, results indicate pervasive roles for subjective norm, planning, anticipated regret and role construction in predicting habits for both restricting and supervising behaviors, while subjective norm was a consistent predictor of intentions for both behaviors. Alongside subjective norm, planning was an important predictor of intentions in the restricting access sample, while barriers and role construction were important predictors of habit and intentions in the supervising sample. The effects of past behavior on habit and intention for both behaviors was largely accounted for by the social cognitive constructs.

Discussion

Lapses in adult supervision and failures in pool barriers are leading contributory factors for pool drowning among children under 5 years [5 11]. In the current study, we used a social cognitive approach, drawing particularly on the TPB [14] with the inclusion of additional social cognitive constructs considered potentially important in this context, to investigate the key factors that relate to intentions and habits toward restricting young children's access to, and supervising young children around, private swimming pools in a sample of parents and caregivers. Current findings identify the important social cognitive factors that are associated with parents' and carers' restricting access and supervising behaviors. Several notable findings emerged from this study, which build on and extend previous research.[22] First, normative factors were related to both the deliberate (intentions) and more automatic (habits) enactment of these pool safety behaviors in the current sample. In addition, planning and anticipated regret were also related to habits for both behaviors, yet perceived barriers were associated with behavior for supervising only. It seems factors guiding restricting access, which likely require regular enactment of routine behaviors (e.g., ensuring gate is not propped open, pool fence meets standards), may be governed by more habitual than intentional processes.

Effective injury prevention for young children is heavily dependent on effective social networks among caregivers, so it is not surprising that social norms and roles play a key role in the formation of intentions and habits for restricting access and supervising young children around private pools. Previous research has found subjective norm and role construction to influence parents' decisions for their young children's health.[28-31] The two types of normative influences identified as predictors of intentions and habits in the current study reflect different sets of beliefs. Subjective norms reflect parents' and caregivers' beliefs with respect to social pressures to perform a given behavior by significant others,[14] while parental role

construction reflect parents' and caregivers' beliefs in what they must do for their children based on socially constructed sets of expectations that guide decisions regarding their children's behavior in specific contexts. [32] Current findings indicate that parents and carers that hold beliefs in their responsibility to restrict access and supervise young children around pools, and those who perceive significant others in the social network are in favour of performing these behaviors, are more likely to hold intentions to perform the behaviors in future.

These findings have implications for future interventions aimed at improving pool safety behaviors of parents. For example, given the significant findings for parents' role constructions, which are optimal for parental involvement in their child's behavior, future interventions could draw upon Hoover-Dempsey and colleagues' model of parental involvement[32] to target strategies that may improve parents fulfilling their constructed roles, including increasing parents' knowledge/skills, improving parents' self-efficacy for supervising and restricting their children around the pool, and providing suggestions to help parents to manage the mix of demands on their time. Furthermore, the important role of subjective norms in this context suggests that the perceived social pressure from others is an important factor for parents making decisions for their children's safety around pools. Strong moral imperatives about parenting may make parents especially sensitive to this pressure. To enhance parents' adherence to these important water safety behaviors, providing information about what others think about and their approval or disapproval of the person's behavior may serve to assist and reinforce performing these behaviors.

Planning and anticipated regret were also important predictors of habit for both restricting access and supervising. The empirical literature supports making clear, specific plans (i.e., plans detailing when, where, and how to perform a behavior) as a key strategy that determines habit formation. [46] This is because planning requires a mental representation of

how to achieve some future outcome that allows the individual to mentally link the intended behavior with a particular context for its enactment, thus connecting the individual with good opportunities to act.[47] Emotion-based cues have also been suggested to aid in the building of habits.[37] Anticipated regret, which encompasses beliefs about whether or not regret will follow from performing or not performing a certain behavior,[33 34] motivates behavior because regret is a pervasive, powerful, and unpleasant emotion that people wish to avoid [35], and is consistent with a long line of research on the effect of anticipated affect on motivation to perform health promoting behaviors.[48] Consistent with this evidence, it might be reasonable to theorise that anticipating this emotion when considering potential risks for children around private swimming pools might act as a cue for parents and carers to restrict access and supervise their young children in those situations. Current data therefore point to the potential utility of messages evoking anticipated regret or emotional consequences in promoting parents' and carers' adoption of, and adherence to, these pool safety behaviors.

Barriers to enacting these pool safety behaviors was found to have an important role in the formation of intentions and habits for supervising only. It seems that barriers such as interfering with other commitments and having limited assistance may be more relevant to supervising than restricting access. To speculate, this might be because supervising likely requires greater vigilance, effort, and dedicated time relative to restricting, which effectively involves fewer actions by comparison. To overcome barriers to supervising, it might be useful if parents and carers build dedicated swimming time into the daily schedule along with their other commitments that need to be fulfilled. This might help to limit distractions that may derail one's supervising intentions and habits and ensure that parents' and carers' attention is devoted to supervising their young children during this dedicated 'swimming pool time', and at all other times have contingencies in place to ensure children are always supervised to avoid children wandering off after swimming time is over.

A final notable finding of the current study was the observation that the psychological factors were more strongly related to habits than intentions. This may be because habits are more important for effective restriction of access than intentions. Restricting access may require enactment of more regular, routine-type behaviors. For example, ensuring pool fences meet Australian Standards, ensuring there is an effective self-closing and self-latching gate, ensuring no climbable objects are left against pool fence, and ensuring the pool gate is not propped open all require regular inspection to ensure that these things are enforced and maintained. Making a plan for undertaking these restricting access behaviors and the monitoring of them may mean that these behaviors become more routinized and less likely to be governed by intentions.

Strengths and Limitations

A key strength of the current study is that it uses a large community sample of pool owners, providing potential opportunity to generalize results to other pool owners of young children beyond the current sample. Some limitations should also be raised. The cross-sectional design precludes drawing causal inferences for relationships between the psychological factors and parents' and carers' intentions and habits with respect to pool safety behaviors for their children. Furthermore, the use of self-report measures may have been subject to socially desirable responses, a concern with all research relying on such measures. One means to mitigate this would be to collect observational data, such as observations of maintenance of pool safety equipment. However, such auditing would be difficult to do at the individual level. In addition, most participants indicated that they had taken their child or children to swimming or water familiarisation lessons (70.7%). This may indicate a degree of external validity if swimming or water familiarisation lessons are amenities predominantly enjoyed by higher income households. However, the

generalizability of the findings may not extend to more socially disadvantaged groups where access and costs are potential barriers to engaging children in water familiarisation lessons.

Conclusions

Current findings provide preliminary indication of the social cognitive factors underpinning parents' and carers' intentions and habits with respect to restricting access and supervising young children around private swimming pools. These findings can inform future experimental research to test whether manipulating the key psychological constructs leads to changes in parents' and carers' intentions and habits toward these pool safety behaviors, which is important for drowning prevention. Findings may also point to the potential effectiveness of messages targeting social and normative factors in changing pool safety behaviors.

References

1. World Health Organization. Global Report on Drowning: Preventing a Leading Killer Geneva: World Health Organization, 2014.
2. Peden AE, Franklin, RC., Mahony, A., Barnsley, P., Scarr, J. Using a retrospective cross-sectional study to analyse unintentional fatal drowning in Australia: ICD-10 coding-based methodologies verses actual deaths. *BMJ Open* 2017;7(e019407). doi:10.1136/bmjopen-2017-019407
3. Rahman A, Mashreky SR, Chowdhury SM, et al. Analysis of the childhood fatal drowning situation in Bangladesh: exploring prevention measures for low income countries. *Injury Prevention* 2009;15(2):75-79.
4. Nixon J, Pearn J, Wilkey I, et al. Fifteen years of child drowning - A 1967-1981 analysis of all fatal cases from the Brisbane drowning study and an 11 year study of consecutive near-drowning cases. *Accident Analysis and Prevention* 1986;186:199-203.
5. Franklin R, Peden, AE. Improving Pool Fencing Legislation in Queensland, Australia: Attitudes and Impact on Child Drowning Fatalities. *International Journal of Environmental Research and Public Health* 2017;14(12):1450. doi:10.3390/ijerph14121450
6. Fang Y, Dai L, Jaung MS, et al. Child drowning deaths in Xiamen city and suburbs, People's Republic of China, 2001-5. *Injury Prevention* 2007;13:339-43.
7. Ma W, Nie S, Xu H, et al. An analysis of risk factors of non-fatal drowning among children in rural areas of Guangdong Province, China: a case-control study. *BMC Public Health* 2010;10(1):156. doi:10.1186/1471-2458-10-156
8. Hyder AA, Borse NN, Blum L, et al. Childhood drowning in low- and middle-income countries: Urgent need for intervention trials. *Journal of Paediatrics and Child Health* 2008;44:221-27.
9. Royal Life Saving Society - Australia. Royal Life Saving National Drowning Report 2017: Royal Life Saving Society - Australia, 2017.
10. Peden AE, Mahony AJ, Barnsley PD, et al Understanding the full burden of drowning: a retrospective, cross-sectional analysis of fatal and non-fatal drowning in Australia. *BMJ Open* 2018;8:e024868. doi:10.1136/bmjopen-2018-024868
11. Peden AE, Mahony, A. Drowning Deaths of Children Under Five in Private Swimming Pools in NSW: A 13 Year Review. Sydney Royal Life Saving Society - Australia, 2016.
12. World Health Organization. Preventing drowning: an implementation guide: World Health Organization, 2017.
13. Royal Life Saving Society - Australia. Keep Watch Information Manual. Sydney: Royal Life Saving Society - Australia, , 2010.
14. Ajzen I. The theory of planned behavior. *Organisational Behavior and Human Decision Processes* 1991;50:179-211. doi:10.1016/0749-5978(91)90020-T
15. Hamilton K, Price S, Keech JJ, et al. Drivers' experiences during floods: Investigating the psychological influences underpinning decisions to avoid driving through floodwater. *International Journal of Disaster Risk Reduction* 2018;28:507-18. doi:10.1016/j.ijdrr.2017.12.013
16. Hamilton K, Peden, AE., Keech, JJ., Hagger, MS. Changing people's attitudes and beliefs toward driving through floodwaters: Evaluation of a video infographic. *Transportation Research Part F* 2018;53:50-60.
17. Hamilton K, Peden, AE., Pearson, M., & Hagger, M.S. Stop there's water on the road! Identifying key beliefs guiding people's willingness to drive through flooded waterways. *Safety Science* 2016;86:308-14. doi:10.1016/j.ssci.2016.07.004.

18. Hamilton K, White KM, Wihardjo K, et al. Targets to promote swimming between the flags among Australian beachgoers. *Health Promotion International* 2016;31(4):908-14. doi:10.1093/heapro/dav079
19. Hamilton K, Schmidt, HJ. Drinking and swimming: Investigating young Australian males' intentions to engage in recreational swimming while under the influence of alcohol. *Journal of Community Health* 2013;39(1):139-47.
20. Hamilton K, Schmidt H. Critical Beliefs Underlying Young Australian Males' Intentions to Engage in Drinking and Swimming. *SAGE Open* 2013;3(4):2158244013508959. doi:10.1177/2158244013508959
21. Pearson M, Hamilton K. Investigating driver willingness to drive through flooded waterways. *Accident Analysis & Prevention* 2014;72:382-90. doi:10.1016/j.aap.2014.07.018
22. White KM, Zhao, X., Hyde, M.K., Hamilton, K. Surviving the swim: Psychosocial influences on pool owners' safety compliance and child supervision behaviours. *Safety Science* 2018;106:176-83.
23. Hamilton K, Schwarzer, RJ. Parents' Planning for Physical Activity for their Pre-School Aged Children: The Role of Psycho-Social Mediators and Moderators. *Child Fam Stud* 2018;27(2):421-30. doi:10.1007/s10826-017-0893-3
24. McEachan RRC, Conner M, Taylor NJ, et al. Prospective prediction of health-related behaviours with the Theory of Planned Behaviour: a meta-analysis. *Health Psychology Review* 2011;5(2):97-144. doi:10.1080/17437199.2010.521684
25. Schwarzer R. Modeling Health Behavior Change: How to Predict and Modify the Adoption and Maintenance of Health Behaviors. *Applied Psychology* 2008;57(1):1-29. doi:10.1111/j.1464-0597.2007.00325.x
26. Gollwitzer PM, Sheeran P. Implementation Intentions and Goal Achievement: A Meta-analysis of Effects and Processes. Advances in Experimental Social Psychology: Academic Press 2006:69-119.
27. Kwasnicka D, Presseau J, White M, et al. Does planning how to cope with anticipated barriers facilitate health-related behaviour change? A systematic review. *Health Psychology Review* 2013;7(2):129-45. doi:10.1080/17437199.2013.766832
28. Hamilton K, Spinks T, White KM, et al. A psychosocial analysis of parents' decisions for limiting their young child's screen time: An examination of attitudes, social norms and roles, and control perceptions. *British Journal of Health Psychology* 2016;21(2):285-301. doi: doi:10.1111/bjhp.12168
29. Hamilton K, Kirkpatrick A, Rebar A, et al. Protecting young children against skin cancer: Parental beliefs, roles, and regret. *Psycho-Oncology* 2017;26(12):2135-41. doi:10.1002/pon.4434
30. Thomson CE, White KM, Hamilton K. Investigating mothers' decisions about their child's sun-protective behaviour using the Theory of Planned Behaviour. *Journal of Health Psychology* 2012;17(7):1001-10. doi:10.1177/1359105311433905
31. Keech JJ, Hatzis D, Kavanagh DJ, et al. Parents' role constructions for facilitating physical activity-related behaviours in their young children. *Australian Journal of Psychology* 2018;70(3):246-57. doi:10.1111/ajpy.12195
32. Hoover-Dempsey K, Sandler, HM. Parental involvement in children's education: Why does it make a difference? *Teachers College Record* 1995;97(2):310-31.
33. Zeelenberg M. Anticipated regret, expected feedback and behavioral decision making. *Journal of Behavioral Decision Making* 1999;12(2):93-106.
34. Abraham C, Sheeran P. Deciding to exercise: The role of anticipated regret. *British Journal of Health Psychology* 2004;9(2):269-78. doi:10.1348/135910704773891096

35. Sheeran P, Orbell S. Augmenting the Theory of Planned Behavior: Roles for Anticipated Regret and Descriptive Norms1. *Journal of Applied Social Psychology* 1999;29(10):2107-42. doi:10.1111/j.1559-1816.1999.tb02298.x
36. Sandberg T, Conner M. Anticipated regret as an additional predictor in the theory of planned behaviour: A meta-analysis. *British Journal of Social Psychology* 2008;47(4):589-606. doi:10.1348/014466607X258704
37. Gardner B. A review and analysis of the use of 'habit' in understanding, predicting and influencing health-related behaviour. *Health Psychology Review* 2015;9(3):277-95. doi:10.1080/17437199.2013.876238
38. Orbell S, Verplanken B. The automatic component of habit in health behavior: Habit as cue-contingent automaticity. *Health Psychology* 2010;29(4):374-83. doi:10.1037/a0019596
39. Australian Water Safety Council. Australian Water Safety Strategy 2016-2020. Sydney: Australian Water Safety Council,, 2016.
40. Ajzen I. Constructing a TPB questionnaire: Conceptual and methodological considerations. 2002; Available from: http://people.umass.edu/~aizen/pdf/tpb.measurement.pdf accessed 1-09-2002.
41. Gardner B, Abraham C, Lally P, et al. Towards parsimony in habit measurement: Testing the convergent and predictive validity of an automaticity subscale of the self-report habit index. *International Journal of Behavioral Nutrition and Physical Activity* 2012;9(1):102. doi:10.1186/1479-5868-9-102
42. Hayes AF. Introduction to mediation, moderation, and conditional process analysis: A regression-based approach. 2nd ed. New York, NY: Guildford Press 2018.
43. Hu L, Bentler PM. Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Struc Eq Model* 1999;6:1-55. doi:10.1080/10705519909540118
44. R Development Core Team. R: A language and environment for statistical computing. Vienna, Austria: R Foundation for Statistical Computing 2017.
45. Ditlevsen S, Christensen U, Lynch J, et al. The mediation proportion: A structural equation approach for estimating the proportion of exposure effect on outcome explained by an intermediate variable. *Epidemiology* 2005;16(1):114-20. doi:10.1097/01.ede.0000147107.76079.07
46. Hagger MS, Luszczynska A, de Wit J, et al. Implementation intention and planning interventions in Health Psychology: Recommendations from the Synergy Expert Group for research and practice. *Psychology & Health* 2016;31(7):814-39. doi:10.1080/08870446.2016.1146719
47. Gillholm R, Ettema D, Selart M, et al. The role of planning for intention-behavior consistency. *Scandinavian Journal of Psychology* 1999;40(4):241-50. doi:10.1111/1467-9450.404123
48. Conner M, McEachan R, Taylor N, et al. Role of affective attitudes and anticipated affective reactions in predicting health behaviors. *Health Psychology* 2015;34(6):642-52. doi:10.1037/hea0000143

Figure 1. Standardized parameter estimates and probability statistics for path analysis of hypothesized model for parents restricting child access to swimming pools.

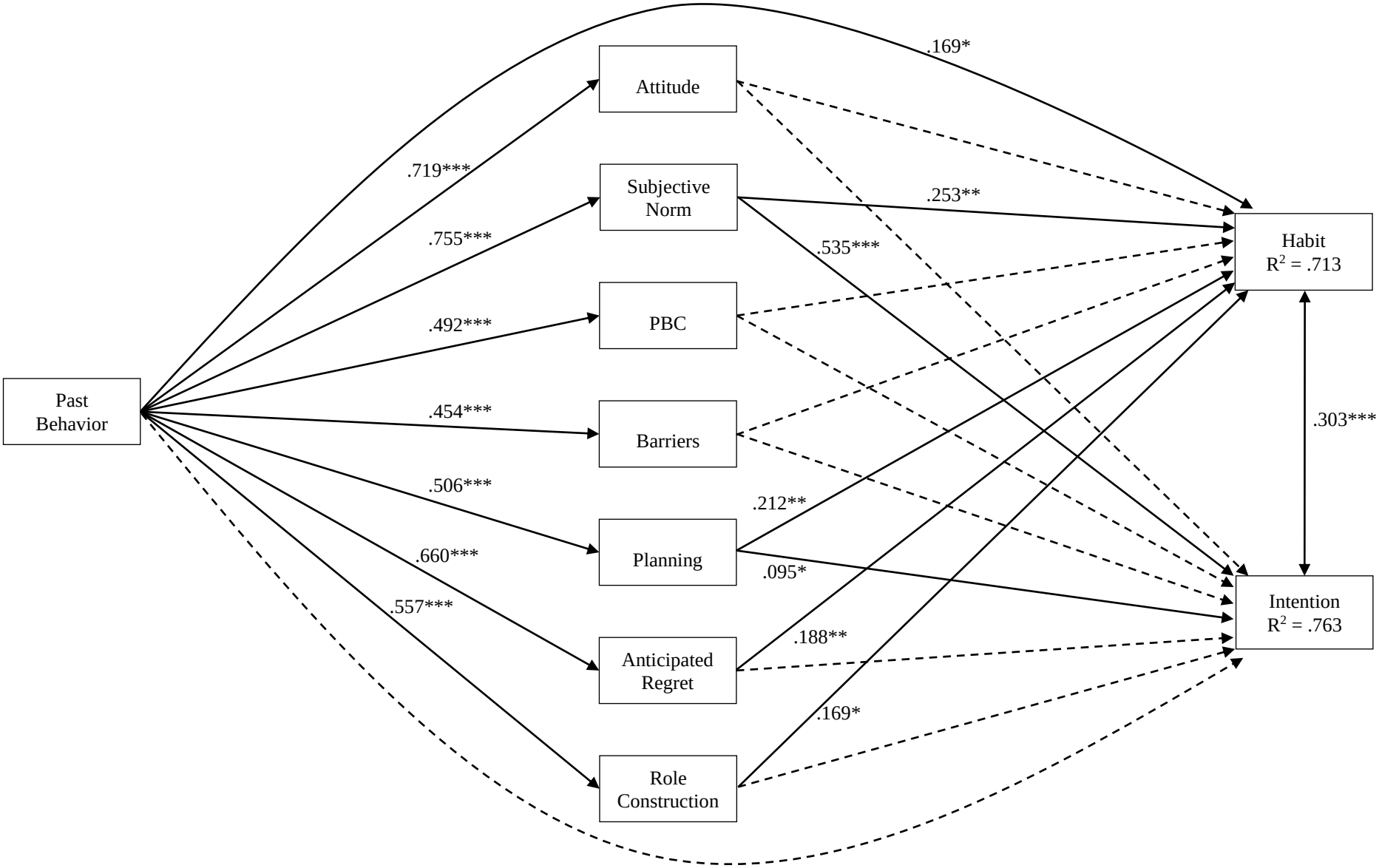

Figure 2. Standardized parameter estimates and probability statistics for path analysis of hypothesized model for parents supervising child around swimming pools.

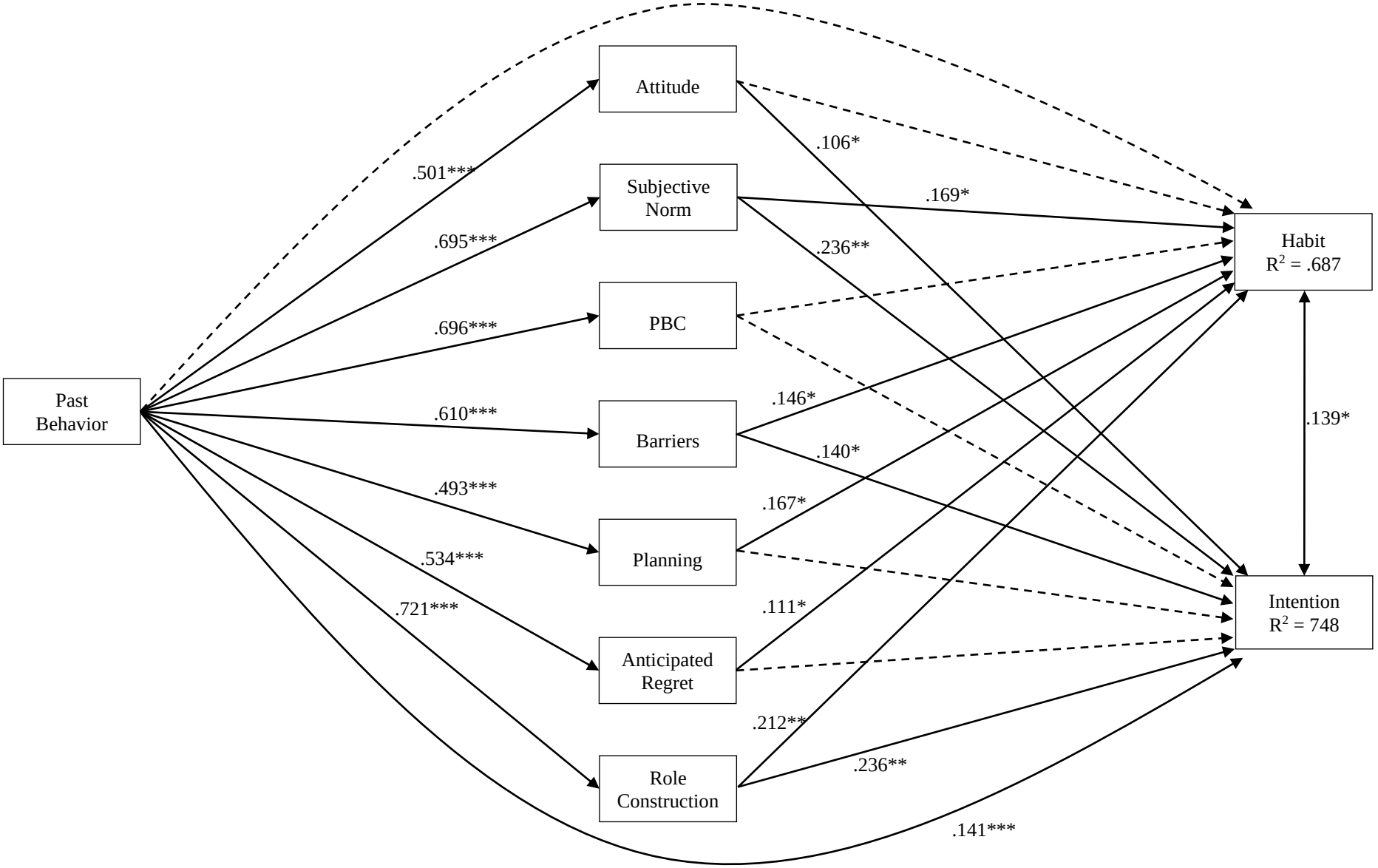

Table 1

Definitions Provided to Participants for Each Behavior

Behavior	Definition
Restricting young children's access to your pool	Ensuring there is a barrier between child and pool; ensuring pool fence meets Australian Standards and is regularly inspected and maintained; ensuring there is an effective self-closing and self-latching gate; ensuring no climbable objects are left against pool fence; ensuring gate is not propped open
Supervising young children around your pool	Ensuring constant visual contact of the child, ensuring you are within arms' reach of child at all times, ensuring an older child is not supervising a younger child

Table 2

Items and Response Scales for Social Cognitive Constructs, Habit, and Behavior Measures for Each Behavior

Construct	Items	Scoring
Intention	I plan to restrict young children's access to my pool/supervise young children around my pool. I intend to restrict young children's access to my pool/supervise young children around my pool. It is likely that I will restrict young children's access to my pool/supervise young children around my pool.	[1] extremely unlikely – [7] extremely likely
Attitude	For me to restrict young children's access to my pool/supervise young children around my pool in the next month would be…	[1] bad – [7] good [1] unwise – [7] wise [1] worthless – [7] valuable [1] negative – [7] positive
Subjective Norm	Those people who are important to me would approve of me restricting young children's access to my pool/supervising young children around my pool. Those people who are important to me would want me to restrict young children's access to my pool/supervise young children around my pool. Those people who are important to me think I should restrict young children's access to my pool/supervise young children around my pool.	[1] strongly disagree – [7] strongly agree
Perceived Behavioral Control	I have complete control over whether I restrict young children's access to my pool/supervise young children around my pool. It is mostly up to me whether I restrict young children's access to my pool/supervise young children around my pool. It would be easy for me to restrict young children's access to my pool/supervise young children around my pool. I am confident I can r restrict young children's access to my pool/supervise young children around my pool.	[1] strongly disagree – [7] strongly agree
Perceived barriers	I am confident that I can restrict young children's access to my pool/supervise young children around my pool in the next month even if I have no assistance from others. I am confident that I can restrict young children's access to my pool/supervise young children around my pool in the next month even if it is time consuming. I am confident that I can restrict young children's access to my pool/supervise young children around my pool in the next month even if it interferes with my other commitments. I am confident that I can restrict young children's access to my pool/supervise young children around my pool in the next month even if it is not easy for me.	[1] strongly disagree – [7] strongly agree
Planning	I have made a plan regarding when to restrict young children's access to my pool/supervise young children around my pool. I have made a plan regarding where to restrict young children's access to my pool/supervise young children around my pool. I have made a plan regarding how to restrict young children's access to my pool/supervise young children around my pool.	[1] strongly disagree – [7] strongly agree

	I have made a plan regarding how often to restrict young children's access to my pool/supervise young children around my pool.	
	I have made a plan regarding what to do if something interferes with my plan to restrict young children's access to my pool/supervise young children around my pool.	
	I have made a plan regarding how to cope with possible setbacks to restrict young children's access to my pool/supervise young children around my pool.	
	I have made a plan regarding what to do in difficult situations to stick to my intentions to restrict young children's access to my pool/supervise young children around my pool.	
	I have made a plan regarding when to pay attention to prevent lapses to restrict young children's access to my pool/supervise young children around my pool.	
Anticipated regret	If I did not restrict young children's access to my pool/supervise young children around my pool, it would upset me.	[1] strongly disagree – [7] strongly agree
	If I did not restrict young children's access to my pool/supervise young children around my pool, I would feel regret.	
	If I did not restrict young children's access to my pool/supervise young children around my pool, I would feel sorry for not doing it.	
Role construction	It is my responsibility as a parent/carer to restrict young children's access to my pool/supervise young children around my pool.	[1] strongly disagree – [7] strongly agree
	It is an important part of my role as a parent/carer to restrict young children's access to my pool/supervise young children around my pool.	
Habit	Restricting young children's access to my pool/supervising young children around my pool is something I do automatically.	[1] strongly disagree – [7] strongly agree
	Restricting young children's access to my pool/supervising young children around my pool is something I do without having to consciously remember.	
	Restricting young children's access to my pool/supervising young children around my pool is something I do without thinking.	
	Restricting young children's access to my pool/supervising young children around my pool is something I start doing before I realise I'm doing it.	
Past behavior	Think about the past month. In general, to what extent did you restrict young children's access to my pool/supervise young children around my pool?	[1] never – [7] always
	Think about the past month. In general, how often did you restrict young children's access to my pool/supervise young children around my pool?	

Table 3

Descriptive Statistics, Alpha Reliability Coefficients, and Zero-Order Correlations Among Study Variables for Parental Restricting and Supervising Behaviors

Variable	Descriptive statistics			Correlations														
	M	SD	α	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Age	34.67	8.76	_	–														
2. Gender[a]	1.75	0.44	_	-.22	–													
3. Employment[b]	1.75	0.43	_	.03	-.25	–												
4. Education[c]	1.72	0.45	_	.04	-.11	.20	–											
5. Income[d]	1.85	0.36	_	.12	-.09	.27	.32	–										
6. Lessons[e]	1.71	0.46	_	.02	-.07	.13	.12	.04	–									
7. PB	6.08	1.38	.93	.11	.16	-.03	.00	.02	-.04	–								
	6.62	0.85	.92	.08	.31	-.10	-.07	.08	-.03	–								
8. Attitude	6.10	1.49	.97	.05	.18	-.06	-.02	.04	-.09	.73	–							
	6.47	1.15	.96	.04	.23	-.12	-.05	.10	-.07	.54	–							
9. SN	6.18	1.30	.96	.07	.25	-.12	-.03	.05	-.05	.78	.73	–						
	6.50	0.93	.93	.11	.33	-.17	-.07	.07	-.05	.74	.54	–						
10. PBC	6.24	1.03	.87	.12	.24	-.15	-.11	.02	.01	.52	.48	.64	–					
	6.41	0.92	.89	.09	.27	-.15	-.11	.04	-.05	.72	.54	.82	–					
11. Barriers	6.27	1.15	.96	.12	.23	-.13	-.05	.11	.00	.48	.48	.62	.76	–				
	6.37	1.01	.95	.10	.25	-.17	-.09	.07	-.03	.64	.48	.73	.76	–				
12. Intention	6.15	1.34	.95	.06	.23	-.12	-.07	.04	-.05	.72	.69	.85	.61	.59	–			
	6.46	0.98	.92	.13	.29	-.18	-.10	.06	-.05	.73	.57	.81	.77	.73	–			
13. Planning	6.01	1.31	.97	.09	.23	-.09	-.11	.02	-.01	.53	.51	.59	.58	.59	.62	–		
	6.17	1.26	.98	.06	.23	-.12	-.12	.02	-.02	.52	.38	.55	.56	.59	.55	–		
14. Habit	6.13	1.32	.95	.04	.27	-.12	-.06	-.01	.02	.69	.60	.75	.59	.59	.79	.67	–	

	6.43	0.97	.93	.06	.27	-.14	-.12	.02	-.02	.68	.51	.75	.73	.71	.74	.61	–	
15. AR	6.14	1.32	.96	.05	.24	-.09	.00	.03	-.01	.68	.57	.71	.58	.57	.69	.61	.73	–
	6.37	1.12	.96	.01	.30	-.12	-.02	.06	.00	.58	.42	.66	.66	.61	.62	.52	.65	–
16. RC	6.34	1.13	.97	.09	.29	-.12	-.08	.04	-.03	.59	.57	.70	.65	.68	.70	.64	.72	.71
	6.51	0.91	.96	.09	.32	-.14	-.06	.06	-.05	.75	.54	.85	.81	.75	.81	.56	.76	.71

Note. Figures on upper line are for parental restricting behaviors and figures on bottom line are for parental supervising behaviors. [a]Gender was coded as 1 = male, 2 = female; [b]Employment was coded as 1 = employed and 0 = unemployed; [c]Highest education level was coded as 1 = completed further education (at least undergraduate degree or tertiary vocational qualification) and 0 = completed school education only; [d]Income was coded as 1 = annual income at or above average ($37,001 or greater) and 2= annual income below average ($37,000 or lower); [e]Swimming lessons was coded as 1 = yes and 0 = no. PB = Past behavior; SN = Subjective Norms; PBC = Perceived behavioral control; AR = Anticipated regret; RC = Role construction.

Table 4

Parameter Estimates and Variability Statistics for the Path Analyses of Hypothesized Model for the Restricting Child Access to Pool and Supervising Child Around Pool Behaviors

Effect	Restricting						Supervising					
	B	SE	95%CI		β	*p*	B	SE	95%CI		β	*p*
			LB	UB					LB	UB		
Direct effects												
Attitude→Habit	-0.024	.038	-0.097	0.056	-.027	.529	0.049	.042	-0.027	0.138	.059	.241
SN→Habit	0.256	.093	0.081	0.438	.253	.006	0.177	.089	0.013	0.356	.169	.046
PBC→Habit	-0.006	.068	-0.141	0.124	-.005	.925	0.044	.071	-0.093	0.179	.042	.531
Barriers→Habit	0.019	.065	-0.106	0.148	.017	.770	0.140	.070	0.023	0.307	.146	.044
Planning→Habit	0.213	.063	0.104	0.344	.212	.001	0.129	.060	0.022	0.268	.167	.032
AR→Habit	0.187	.079	0.065	0.361	.188	.017	0.096	.045	0.025	0.200	.111	.031
RC→Habit	0.197	.086	0.035	0.369	.169	.022	0.225	.096	0.030	0.409	.212	.019
PB→Habit	0.162	.052	0.050	0.258	.169	.002	0.108	.059	-0.015	0.222	.094	.068
Attitude→Intention	0.093	.054	-0.004	0.214	.104	.084	0.090	.036	0.028	0.166	.106	.012
SN→Intention	0.550	.086	0.367	0.702	.535	.000	0.248	.078	0.098	0.396	.236	.001
PBC→Intention	0.058	.063	-0.073	0.183	.044	.360	0.084	.075	-0.062	0.238	.079	.264
Barriers→Intention	-0.017	.058	-0.132	0.104	-.014	.774	0.135	.060	0.044	0.274	.140	.024
Planning→Intention	0.097	.042	0.017	0.183	.095	.021	0.020	.029	-0.035	0.080	.025	.492
AR→Intention	0.057	.054	-0.039	0.174	.056	.292	0.017	.030	-0.035	0.084	.020	.570
RC→Intention	0.126	.067	-0.005	0.260	.107	.059	0.252	.098	0.053	0.437	.236	.011
PB→Intention	0.062	.065	-0.068	0.184	.064	.341	0.163	.059	0.050	0.273	.141	.006
PB→Attitude	0.775	.042	0.686	0.851	.719	<.001	0.682	.068	0.548	0.821	.501	<.001
PB→SN	0.712	.047	0.623	0.807	.755	<.001	0.763	.066	0.634	0.893	.695	<.001
PB→PBC	0.367	.048	0.272	0.461	.492	<.001	0.753	.063	0.630	0.876	.696	<.001
PB→Barriers	0.379	.053	0.278	0.488	.454	<.001	0.730	.071	0.595	0.877	.610	<.001
PB→Planning	0.480	.052	0.378	0.581	.506	<.001	0.732	.064	0.616	0.870	.493	<.001
PB→AR	0.632	.049	0.537	0.729	.660	<.001	0.708	.075	0.577	0.866	.534	<.001
PB→RC	0.457	.055	0.355	0.575	.557	<.001	-0.778	.056	0.680	0.890	.721	<.001
Indirect effects												
PB→Attitude→Habit	-0.018	.029	-0.075	0.043	-.019	.529	0.034	.030	0.257	-0.018	.096	.029
PB→SN→Habit	0.183	.068	0.060	0.318	.191	.007	0.135	.069	0.051	0.011	.280	.117
PB→PBC→Habit	-0.002	.025	-0.051	0.048	-.002	.926	0.033	.054	0.534	-0.075	.133	.029
PB→Barriers→Habit	0.007	.026	-0.039	0.064	.008	.778	0.103	.055	0.061	0.017	.228	.089
PB→Planning→Habit	0.102	.034	0.046	0.176	.107	.002	0.094	.045	0.037	0.015	.198	.082
PB→AR→Habit	0.118	.055	0.039	0.245	.124	.031	0.068	.034	0.046	0.018	.151	.059

PB→RC→Habit	0.090	.044	0.016	0.192	.094	.042	0.175	.075	0.019	0.023	.318	.153
PB→Attitude→Intention	0.072	.043	-0.003	0.170	.075	.090	0.061	.025	0.016	0.018	.116	.053
PB→SN→Intention	0.391	.069	0.248	0.523	.404	<.001	0.189	.063	0.003	0.067	.315	.164
PB→PBC→Intention	0.021	.024	-0.023	0.073	.022	.377	0.063	.057	0.269	-0.048	.182	.055
PB→Barriers→Intention	-0.006	.022	-0.047	0.044	-.006	.779	0.099	.047	0.034	0.032	.213	.086
PB→Planning→Intention	0.047	.021	0.008	0.093	.048	.027	0.014	.021	0.498	-0.025	.058	.013
PB→AR→Intention	0.036	.035	-0.024	0.115	.037	.308	0.012	.022	0.590	-0.024	.063	.011
PB→RC→Intention	0.090	.048	-0.003	0.188	.081	.063	0.192	.079	0.015	0.040	.350	.164
Total indirect effects												
PB→Habit	0.480	.055	0.384	0.597	.503	<.001	0.642	.065	0.526	0.783	.559	<.001
PB→Intention	0.651	.070	0.513	0.794	.659	<.001	0.631	.071	0.497	0.778	.545	<.001
Total effects												
PB→Habit	0.642	.054	0.533	0.748	.672	<.001	0.750	.058	0.643	0.870	.653	<.001
PB→Intention	0.712	.056	0.601	0.819	.723	<.001	0.794	.065	0.674	0.936	.686	<.001
Correlations												
Attitude↔SN	0.283	.054	0.174	0.390	.354	<.001	0.141	.035	0.072	0.212	.240	<.001
Attitude↔PBC	0.140	.045	0.054	0.228	.164	.002	0.159	.038	0.083	0.235	.261	<.001
Attitude↔Barriers	0.193	.051	0.095	0.291	.197	<.001	0.148	.040	0.073	0.223	.200	<.001
Attitude↔Planning	0.222	.074	0.091	0.381	.203	.003	0.134	.071	0.016	0.284	.131	.059
Attitude↔AR	0.130	.047	0.039	0.222	.136	.006	0.124	.039	0.044	0.197	.142	.001
Attitude↔RC	0.211	.047	0.120	0.305	.239	<.001	0.130	.036	0.057	0.198	.227	<.001
SN↔PBC	0.276	.048	0.182	0.367	.407	<.001	0.241	.049	0.149	0.338	.623	<.001
SN↔Barriers	0.311	.052	0.208	0.407	.402	<.001	0.230	.050	0.137	0.336	.490	<.001
SN↔Planning	0.261	.053	0.159	0.370	.303	<.001	0.178	.046	0.096	0.274	.274	<.001
SN↔AR	0.282	.052	0.182	0.387	.373	<.001	0.226	.047	0.137	0.318	.407	<.001
SN↔RC	0.310	.053	0.202	0.421	.445	<.001	0.237	.043	0.152	0.324	.652	<.001
PBC↔Barriers	0.544	.059	0.424	0.655	.657	<.001	0.270	.049	0.173	0.369	.557	<.001
PBC↔Planning	0.363	.065	0.231	0.489	.392	<.001	0.198	.041	0.119	0.282	.294	<.001
PBC↔AR	0.272	.053	0.166	0.381	.336	<.001	0.250	.047	0.155	0.342	.437	<.001
PBC↔RC	0.349	.060	0.227	0.458	.467	<.001	0.223	.041	0.141	0.305	.594	<.001
Barriers↔Planning	0.445	.073	0.300	0.592	.422	<.001	0.315	.058	0.202	0.432	.387	<.001
Barriers↔AR	0.331	.059	0.217	0.451	.359	<.001	0.259	.050	0.157	0.360	.374	<.001
Barriers↔RC	0.456	.071	0.313	0.600	.535	<.001	0.239	.046	0.150	0.330	.526	<.001
Planning↔AR	0.389	.063	0.264	0.513	.378	<.001	0.291	.057	0.178	0.401	.303	<.001
Planning↔RC	0.430	.071	0.291	0.567	.452	<.001	0.180	.042	0.096	0.259	.285	<.001
AR↔RC	0.414	.061	0.286	0.534	.498	<.001	0.270	.042	0.183	0.352	.504	<.001
Habit↔Intention	0.140	.034	0.063	0.198	.303	<.001	0.037	.016	0.004	0.067	.139	.018

Note. B = Unstandardized parameter estimate; 95% CI = 95% confidence intervals of unstandardized parameter estimate using bootstrapped standard errors (replications, n = 1000); LB = Lower bound of 95% CI; UB = Upper bound of 95% CI; β = Standardized parameter estimate; p = Probability value of unstandardized parameter estimate; AR = Anticipated regret; SN = Subjective norm; PBC = Perceived behavioral control; RC = Role construction.