A Longitudinal Examination of the Role of Social Identity in Supporting Health and Well-Being in Retirement

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Social factors are major determinants of the success of retirement transitions. However, we do not yet fully understand the nature and basis of this impact, particularly as it relates to social group belonging. To address this issue the present article investigated the role that social group memberships play in supporting people's health and well-being in the early phase of transitioning to retirement. More specifically, we drew on the social identity model of identity change (SIMIC) to examine two pathways in which social group processes are theorized to influence adjustment to life change—social identity continuity and social identity gain. To test these pathways, a sample of Australian workers who had transitioned to retirement in the last 12 months ($N = 170$) were surveyed about their (a) preretirement multiple group memberships and postretirement maintained and new group memberships and (b) their perceived physical health, mental health, and life satisfaction after retirement. While preretirement group memberships did not affect retirement outcomes directly, they supported them indirectly by enabling people both to maintain some existing group memberships and to gain some new group memberships postretirement; as predicted by SIMIC. These findings confirm the importance of social factors and of social group membership in particular, for retiree health and well-being. Theoretically, they support the generalizability of SIMIC and its capacity to explain adjustment to diverse life changes including retirement.

Public Significance Statement

Social relationships have been shown to play an important role in supporting retirement outcomes, but how they do so is less clear. This study addresses this issue by testing theoretically derived predictions about the contribution that social group memberships before and after the retirement transition make to perceived mental health, physical health, and well-being. The findings show that outcomes are improved where retirees maintain valued old group memberships and gain new group memberships in the transition. These data highlight the importance of focusing on these social group ties in enhancing health and well-being in retirement.

Retirement is a major life change that many people look forward to. However, a positive retirement experience is not universal, and a significant proportion of retirees experience a marked reduction in mental health and well-being after they stop working. There are

numerous factors that contribute to effective adjustment, with social relationships often identified as a key contributor in narrative and systematic reviews (Barbosa et al., 2016; Wang et al., 2011; Wang & Hesketh, 2012; Wang & Shultz, 2010). Consistent with this, meta-analytic results have shown that social engagement is as important as physical health in supporting retirement adjustment, and significantly more important than marital status, financial situation, and work exit conditions (La Rue et al., 2022).

However, social relationships are often complex, varying in their nature and quality. Accordingly, understanding the contribution that different kinds of social ties (e.g., with individuals such as a spouse or confidant; with social groups such as family, friendship, or work groups) have on outcomes is important if we want to support people to optimize their particular contribution to the retirement transition. This is complicated by the fact that most conceptual models of retirement adjustment neither specify the kind of social relationships

that are beneficial nor the pathways through which social relationships might exert their effects. So, while many models recognize that social engagement is important for retiree adjustment, they do not explain when or why this is the case.

One exception is the social identity model of identity change (SIMIC; C. Haslam, Haslam, et al., 2021). This model focuses on social group memberships, in particular, and argues that these relationships are important for life-change adjustment because they can furnish people with a sense of social identity (Tajfel & Turner, 1979). Social identities describe the sense of self-definition and affiliation that people derive from their membership of social groups. This conceptualization has been applied in the social identity approach to health (C. Haslam, Jetten, et al., 2018; Jetten et al., 2012) to explain why group memberships and associated social identities are an important determinant of health and well-being not only throughout the lifespan but also in the context of life change. In particular, SIMIC argues that multiple group memberships support adjustment via two pathways: a social identity continuity pathway, associated with the maintenance of pretransition group memberships, and a social identity gain pathway, associated with the acquisition of new group memberships. In the retirement context, evidence of the importance of these two pathways has been provided by studies that have either (a) focused on particular SIMIC constructs (e.g., multiple group memberships; Steffens, Cruwys, et al., 2016), (b) considered the contribution of group-based psychological resources as mechanisms of outcomes (e.g., social support; Steffens, Jetten, et al., 2016), or (c) interrogated one—but not both—of the SIMIC pathways (i.e., social identity gain; C. Haslam, Lam, et al., 2018). Seeking to address these shortcomings, the present work uses a longitudinal study to assess the contribution of both SIMIC pathways to adjustment in the first year of retirement.

Models of Retirement Adjustment

Understanding what contributes to successful retirement adjustment has been the focus of decades of research. Retirement adjustment is generally conceptualized as the process of adapting to the changes arising from leaving the workforce (e.g., van Solinge & Henkens, 2008). Much of the research on this topic has considered individual-level factors that contribute to the quality of adjustment, as indexed by a wide range of measures that include general health and well-being, the resources that a person can access (e.g., financial, physical, emotional, social), and specific work exit conditions (e.g., timing of retirement, extent of retirement planning). Increasingly researchers are emphasizing the importance of recognizing the wider contexts (e.g., temporal, cultural, historical) that influence these factors (e.g., Henning et al., 2022). Nevertheless, among the many predictors of adjustment that have been examined over the years, several have consistently emerged as contributing to the quality of a person's retirement—notably their health status, demographic factors (age, gender, income), work and exit conditions (job stressors, engagement in bridge work, planning, and readiness for retirement), marital status, and wider social engagement (e.g., Dingemans & Henkens, 2014; Pinquart & Schindler, 2007; Potočnik & Sonnentag, 2013; Reitzes & Mutran, 2004; van Solinge & Henkens, 2008; Wang, 2007). This work has in turn informed the development of theoretical frameworks that seek to explain adjustment trajectories.

Among these, three came to dominate early understanding of retirement adjustment: (a) role theory (Barnes-Farrell, 2003) which conceptualizes retirement as a role transition, (b) continuity theory (Atchley, 1989, 1999) which draws attention to the threat that retirement poses for a person's sense of personal consistency, and (c) the life course approach (van Solinge & Henkens, 2008) which recognizes the influence of personal history, individual attributes, and the transition context. However, as Wang (2007) observed, none of these theories account for the full range of retirement adjustment experiences identified in the literature, which he argued differs between individuals as a function of factors such as preparation for the transition, work experiences, health status, and social relationships. This led him to identify three adjustment profiles. The maintaining profile is seen in retirees who engage in planning for retirement and/or bridge employment, and which is associated with stable well-being as people transition into retirement. The recovering profile is typical of those whose work was unsatisfying, stressful, and demanding, leading them to experience a gradual increase in well-being after retirement. Finally, a U-shaped profile is characteristic of retirees who report a decline in health or relationships in the lead up to retirement and an initial dip in well-being, which gradually increases over time postretirement. Relatedly, other researchers have also highlighted different adjustment trajectories as a function of a person's work satisfaction, status, and work demands (Westerlund et al., 2009), or their satisfaction with life in retirement (Heybroek et al., 2015).

Drawing this together, Wang argued that multiple theories are needed to account for these different adjustment patterns and that a more holistic perspective that integrates different elements of key theories would have greater explanatory power. This led him to propose the resource-based dynamic model of retirement adjustment in which adjustment is understood to vary as a function of the previous experiences a person brings to the retirement transition that build their resource base, but also their experiences and associated resources within the transition itself (Wang et al., 2011). This model sees retirement adjustment as a dynamic process, whereby well-being fluctuates as a function of the resources a person has access to at any given point in time. Essentially, adjustment is enhanced where resources are both appropriate and available but is poorer in their absence.

Wang's model provides a useful descriptive synthesis of the empirical landscape that has been charted by previous research on retirement adjustment. The challenge with holistic models, though, is that gains achieved through inclusivity often come at the cost of specificity, particularly when it comes to identifying what precisely it is about each predictor or resource that is responsible for relevant outcomes. Certainly, having more money to support oneself in retirement is generally associated with better adjustment, but there comes a point at which additional income has a little overall effect on well-being (e.g., Diener & Biswas-Diener, 2002). Likewise, high-quality relationships are likely to have beneficial effects on well-being, but so too will other aspects of these relationships, including their number, nature, and importance. This also poses challenges for intervention. It is difficult to design evidence and theory-informed interventions if it is not clear what features of social relationships are key for adjustment. Thus, despite their plausibility and general heuristic utility, a limitation of holistic theories is therefore that they fail to identify what exactly it is about a particular resource that promotes successful adjustment.

Seeking to address this issue, Hesketh's retirement transition adjustment framework (RTAF) points to some of these nuances in

the social realm (Hesketh et al., 2011, 2015). In particular, it argues that social processes do not have an invariant and uniform impact on retirement adjustment but instead are, at least partly, shaped by a person's social group memberships—in ways that inform their self-concept and their attitudes, values, and goals (as specified by social identity theorizing; Tajfel & Turner, 1979; Turner et al., 1987, 1994). Yet while this is an important observation (as we detail below in outlining the social identity approach), the model is insufficiently specified to explain precisely how social groups might enhance or hinder the retirement transition. This is a lacuna that a model of change informed by social identity theorizing has sought to address, and it is this model that informs the design of the present study.

SIMIC

SIMIC is a model of adjustment to life change that seeks to specify more precisely how social resources—specifically, those derived from internalized social group memberships (e.g., family, friendship, community, work, voluntary, leisure, faith, political, and sporting groups)—affect people's adjustment to life transitions. The model draws on principles of social identity theorizing to explain when, how, and why social group memberships play a role in structuring people's sense of self (after Tajfel & Turner, 1979). In particular, self-categorization theory provides a sociocognitive account of the factors that lead a person's group memberships to define their self-concept (their social identity) and the consequences of this for cognition and behavior (Turner et al., 1987, 1994). Central here is the idea that a person's sense of self varies across social contexts. In some contexts people can think of themselves—and subsequently behave—as unique individuals (in terms of their personal identity, as "I" and "me"; Turner, 1982), but in a range of other contexts, they can think and function more as members of social groups (in terms of their social identity as "we" and "us"). At a football match, for example, a person is more likely to define themselves, and act, as a supporter of one of the teams that is playing (e.g., as "us Lions supporters"), than they would be in the workplace (where they may be more likely define themselves as a member of a work team or profession, e.g., as "us accountants"). In these contexts, the person functions as a member of the relevant group in ways that allow them to coordinate their behavior with other in-group members (S. A. Haslam, 2001) and the group functions as a resource from which people can access support, esteem, and a sense of purpose and personal control (Cruwys et al., 2014; Greenaway et al., 2015; S. A. Haslam et al., 2012; Jetten et al., 2015; Johnstone et al., 2015; Sani et al., 2015). In turn, these social identity-based psychological resources have been found to have a positive impact on health and well-being and to increase people's resilience in the face of challenge and adversity (C. Haslam, Jetten, et al., 2018; Van Dick et al., 2017). Critically though, the social identity approach argues that it is only the groups that people internalize and identify and bond with that have the power to effect enable these resources to effect change—in some cases for the better, when they have a positive impact (e.g., modeling healthy eating practices), and in other cases for the worse, when they have a negative impact (e.g., encouraging exploitation, bullying, or discrimination).

Particularly relevant to the present study is the role that social identity processes play in helping people negotiate major life changes. This is something that SIMIC clarifies by detailing the social group processes and pathways that support adjustment to life change (see C. Haslam, Haslam, et al., 2021; C. Haslam, Steffens, et al., 2019, for reviews).

### The Role of Multiple Group Memberships

SIMIC argues that all forms of identity change create uncertainty associated with the potential for identity loss, but that this can be offset by processes of identity continuity and identity gain—each of which is associated with a distinct pathway (as indicated in Figure 1). The model argues that both pathways are facilitated by having access to multiple group memberships prior to any life change (that are psychologically internalized in terms of social identities). In line with this proposition, seeing oneself as belonging to multiple groups has been found to be health-protective in a range of contexts—in part due to the psychological resources that social identities provide people with (e.g., Jetten et al., 2015; Johnstone et al., 2015).

In the context of life change, having multiple group memberships prior to the change has also been shown to improve health and well-being outcomes: enhancing life satisfaction following stroke (C. Haslam et al., 2008), reducing anxiety postmigration (Smeekes et al., 2017), improving the health and performance of athletes entering a sporting academy (Rees et al., 2022), and increasing life satisfaction among students transitioning to university study (Cruwys et al., 2021; Iyer et al., 2009). In the retirement context, multiple group memberships have also been found to reduce mortality (Steffens, Cruwys, et al., 2016) and to increase life satisfaction (Steffens, Jetten, et al., 2016). Indeed, Steffens, Cruwys, et al. (2016) found that losing two group memberships was associated with a 12% increase in mortality risk in the 6 years after retirement, but this declined to 5% if only one group was lost, and 0.5% if no groups were lost. A fundamental hypothesis derived from this analysis is that preretirement of multiple group memberships should predict enhanced health and well-being following retirement. Taking this further in the present study, where the focus is on examining the effect of this construct across two time points in the first 12 months of retirement, we expect that multiple group memberships prior to the retirement transition will predict better adjustment outcomes and that it will explain additional variance over established demographic predictors of adjustment.

SIMIC Pathways: The Roles of Social Group Continuity and Gain

SIMIC further identifies the means through which multiple group memberships influence health and well-being: by providing a platform for other protective group processes to come into play. These relate to the social groups maintained and gained in the retirement transition, with the focus on the general quality of these groups (not on the contribution of particular types of groups). The first pathway is a social identity continuity pathway, in which having multiple group memberships prior to any life transition increases the likelihood that some group memberships (and associated psychological resources) will be retained in the transition. The importance of self-continuity in the face of life change is not new to the retirement literature—having been a focus of (a) Atchley's (1989, 1999) continuity theory, (b) investigations of leisure activity, where continued engagement in old activities and related new activities has been shown to enhance self-efficacy and one's sense of mastery in retirement (Earl et al., 2015; Henning et al., 2021; Nimrod, 2007),

Figure 1
SIMIC Hypotheses
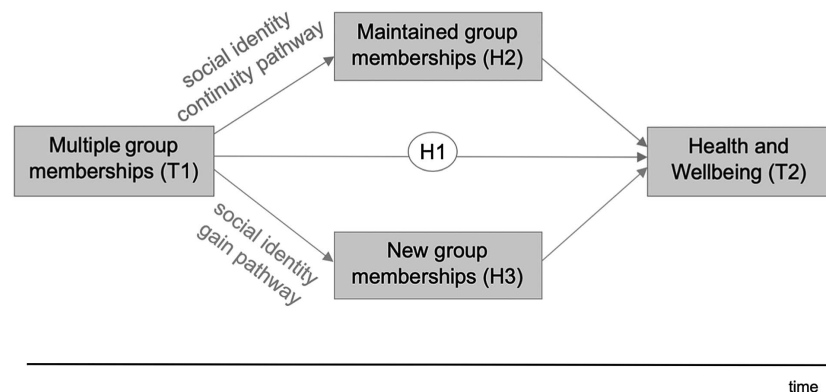
Note. SIMIC = social identity model of identity change; T = time; H = hypothesis.

(c) Wittman's (2019) account of work role transitions that recognizes the influence of pre-existing, lingering identities on adjustment, and (d) Amabile's (2019) concept of identity bridging in adjustment, where maintenance of preretirement identity is supported, *inter alia*, by continued contact with people from work or by applying preretirement skills. What differentiates SIMIC's continuity pathway from these accounts and investigations is its focus on identity change as a social group–based phenomenon (and not simply as a function of altered work roles or maintained skills and activity) and its relevance across all forms of life transition (not just aging or retirement). In particular, SIMIC argues that it is by maintaining group memberships that individuals gain a sense of continuity in the face of change and the challenges this poses. For instance, a retiree might benefit from maintaining their membership of a social club comprising old work colleagues or a non-work-related book group that they value. This aligns with a key social identity continuity hypothesis from SIMIC that pre-existing multiple group memberships support adjustment by providing a basis for maintaining some group memberships in the face of life change.

While continuity is important to provide a sense of stability in the context of change, it is also the case that this is not always desirable (e.g., if a work group was a source of stress and burden) or possible (e.g., when retirement forces a person to lose a meaningful workgroup). Particularly in the context of losing valued group memberships, SIMIC proposes another means through which adjustment can be supported. This is the focus of SIMIC's second pathway through which pretransition of multiple group memberships scaffold the development of new group memberships. Not least, this is because multiple groups have been observed to increase people's opportunities and openness to discover new groups (e.g., because friends in an existing group introduce them to other groups). The likelihood of gaining new groups is also enhanced by retirees having a greater capacity to allocate time to these activities; time that their work had previously claimed. According to SIMIC's social identity gain hypothesis then, preretirement multiple group memberships are important for adjustment because they provide a platform from which to acquire new group memberships after this life change.

There is growing support for the importance of both the identity continuity pathway (e.g., Ethier & Deaux, 1994; Praharso et al., 2017; Seymour-Smith et al., 2017; Smeekes et al., 2017), and the identity gain pathway (e.g., Buckingham et al., 2013; Drury et al., 2016; Gleibs et al., 2011) in understanding the health and well-being benefits underlying multiple group memberships. Most of this previous research has been conducted in the context of life changes other than retirement that includes transitioning to university study or out of elite sport, becoming a new parent, and recovering from addiction, illness, and trauma (e.g., Best et al., 2016; Haslam, Lam, et al., 2021; Iyer et al., 2009; Seymour-Smith et al., 2017). There is, however, some support for SIMIC's social identity gain pathway from a two-wave study of retirees from the general workforce in the United States. This found that multiple group membership at the point of retirement (Wave 1) predicted psychological well-being 3 months later (Wave 2) and that the relationship was mediated via the acquisition of new group memberships (Haslam, Lam, et al., 2018). Nevertheless, this study is not definitive—not least because while it allowed for a more comprehensive examination of social identity processes (in ways that earlier studies had not, e.g., Steffens, Cruwys, et al., 2016) its longitudinal horizon was relatively short, and it only examined one of the SIMIC pathways. Both these limitations are addressed in this article.

The Present Study

In light of the limitations in previous research that has tested SIMIC, the goal of the present research was to provide the first test of the capacity of the model's two pathways to explain the dynamics of adjustment early in the retirement transition. For this purpose, we tracked a sample of people transitioning to retirement to explore the capacity for maintained and new group memberships to predict their subjective health and well-being outcomes over this period. This was measured using items and scales that tapped subjective physical health, mental health, and life satisfaction. These were chosen in light of their relationship with social group connectedness (see C. Haslam, Jetten, et al., 2018)—a relationship also observed in the case of physical health (e.g., because physical activity proves more sustainable when undertaken in groups; Stevens & Cruwys, 2020). We test three hypotheses derived from SIMIC. First, and in line with previous research, we expect that multiple preretirement (i.e., T1) group memberships will be associated with better transition outcomes at T2 (Hypothesis [H1a]) and explain significant additional variance

over established demographic factors of retirement adjustment (age, gender, partnership status, income; H1b). More critical though to our primary purpose is the test of SIMIC pathways in the remaining two hypotheses. Here, we predict that multiple preretirement group memberships at T1 will provide the basis for maintaining group memberships (H2) and gaining new group memberships (H3) at T2 in supporting health and well-being outcomes in retirement. These hypotheses were tested in the context of a longitudinal study of Australian retirees' self-reported mental health, life satisfaction, and physical health across the first year of their retirement.

Method

Transparency and Openness

Data and analytic code used in the analysis for this study are available in the Open Science Framework platform (via https://osf.io/xpsj5/files/osfstorage in the folder with this article's title; C. Haslam et al., 2023). The general study design, hypotheses, and analyses were specified in the grant application awarded and supporting the research (Australian Research Council Discovery Project No. DP160102514) before data collection, but were not formally preregistered. There are no previous publications using these data to test our SIMIC hypotheses. The data have been used previously to test different research questions and hypotheses (e.g., testing the relationship between personality and imprudent financial behavior, Moss et al., 2018; validating a new retirement confidence index, Ghafoori et al., 2021).

Participants and Procedure

As noted above, the sample comprised Australian workers who had transitioned to retirement in the last 12 months. Data were sourced from a longitudinal data set comprising responses from participants invited to take part in a survey seeking people's opinions and attitudes to financial behavior and retirement (see Moss et al., 2018). These participants were recruited through an online panel company, the Online Research Unit that at the time of data collection comprised over 350,000 Australians who were representative of the demographic and socioeconomic diversity of the population. Due to funding constraints, a random sample of individuals from this panel aged over 50 years and comprising roughly equal numbers of working and retired people were invited to take part in the survey at the initial wave ($N = 3,000$) with an additional 3,000 invitations made to extend recruitment annually at each subsequent wave. Although five waves of data were available, the initial wave did not contain the variables of interest for our analysis. In the remaining four waves, 206 respondents transitioned from active employment to retirement. Among these, 170 met our criterion of having retired recently; more specifically, having retired between two consecutive waves of data collection, and thus a maximum of 12 months before the T2 survey (i.e., $n = 50$ in 2018–2019, $n = 60$ in 2019–2020, and $n = 60$ in 2020–2021). The remaining 36 had missing waves between their active employment and retirement waves. As their retirement time-frames could not be confirmed, they were excluded from the analysis. Accordingly, the remaining 170 respondents comprised all participants from whom we had available data to test our hypotheses. No separate power calculations were conducted. Two consecutive waves of data were used: Time 1 (T1) representing active employment and T2 retirement.

The mean age of this sample at T1 was 64 years ($SD = 6.19$), 49% were female, 42% had completed university study, about 65% were partnered and the mean household income was in the range of $21,000–$75,000 per annum (see Table 1). Among these respondents, 72% were Australian born and 66% reported their ancestry as Australian. Respondents also indicated that they worked in a diverse range of industries before retirement with health care and social assistance (18.8%), education and training (12.5%), and retail trade (8.0%) being the largest three. Ethical approval for the use of these data was provided by the University of Queensland Human Research Ethics Committee (project title: Adjustment to Retirement; Approval No. 2015001736).

Measures

Demographic Predictors of Retirement Adjustment

The following demographic variables were used as covariates in analysis (see Table 1): age, gender (0 = male; 1 = female), education level (0 = have not completed university; 1 = completed university), partnership status (0 = not partnered; 1 = married/de facto/living with partner), and household income per annum (in which respondents indicated one of the eight categories, 0 = negative or nil income, 1 = up to 20k, 2 = 21–50k, 3 = 51–75k, 4 = 76–100k, 5 = 101–150k, 6 = 151–200k, 7 = $201k+ per annum).

Social Group Membership

Our three social group connectedness measures were taken from the Exeter Identity Transitions Scales (EXITS; C. Haslam et al., 2008) which measured subjective multiple, maintained, and new group memberships that people have internalized into their sense of self. Each scale has been used extensively in previous research to test the group processes specified in SIMIC in the context of various life changes (e.g., parenthood, university study, migration; see C. Haslam, Haslam, et al., 2021 for a review). The internal reliability of the four-item measures ranged from .78 to .97 (e.g., Cruwys et al., 2021; Seymour-Smith et al., 2017; see also measures of identity, health, and well-being in the appendix of Haslam, Jetten, et al., 2018), and there is evidence showing that the EXITS has good reliability and validity relative to standard group listing tasks

Table 1
Sample Demographic Data

Variable	Range	M (SD)/%
Age	50–84	64.09 (6.19)
Gender (1 = female)		48.8%
Education level (1 = completed university)		41.7%
Partnership status (1 = partnered)		65.6%
Household income (per annum)	0–7	2.96 (1.50)
0 = negative or nil income		1.2%
1 = up to 20,000		7.6%
2 = 21,000–50,000		31.8%
3 = 51,000–75,000		20%
4 = 76,000–100,000		11.8%
5 = 101,000–150,000		7.1%
6 = 151,000–200,000		2.4%
7 = $201,000+		3.5%

Note. Measured at T1. T = time.

(Cruwys et al., 2016). Responses to the measures were made on 7-point scales (1 = *strongly disagree*, 7 = *strongly agree*) and were averaged for use in the analysis. Higher scores indicate a stronger sense of belonging with multiple, maintained, and new group memberships.

Multiple Group Memberships (Preretirement, T1; α_{T1} = .93). A four-item scale assessed the extent to which respondents perceived themselves as belonging to multiple groups before retirement (e.g., "I belong to lots of different groups," "I have strong ties with lots of different groups").

Maintained Group Memberships (Postretirement, T2; α_{T2} = .97). This four-item scale assessed respondents' perceptions of the extent to which they had maintained pre-existing group memberships in retirement (e.g., "After retirement, I still belong to the same groups I was a member of before retirement," "After retirement, I continue to have strong ties with the same groups as before retirement").

New Group Memberships (Postretirement, T2; α_{T2} = .97). Four items measured the extent to which respondents felt they had acquired new group memberships in retirement (e.g., "After retirement, I have developed strong ties with one or more new groups," After retirement, I have joined one or more new groups").

Health and Well-Being

Three measures indexed the perceived quality of respondents' physical health, mental well-being, and life satisfaction at T1 and T2.

Physical Health Questionnaire (Schat et al., 2005; α_{T1} = .77, α_{T2} = .81). This comprised 14 items assessing somatic symptoms experienced in the past month. These symptoms included gastrointestinal problems (e.g., "suffering from an upset stomach"), headaches (e.g., "getting a headache when there was a lot of pressure on getting things done"), sleep disturbance (e.g., "having difficulty getting to sleep at night"), and respiratory illness (e.g., "having minor colds"). Each item was rated on a 7-point scale (where 1 = *not at all*, 7 = *all of the time*). The items were reversed and then averaged so that higher scores indicated better physical health.

Mental Health Continuum–Short Form (Keyes, 2002; Keyes et al., 2008; α_{T1} = .94, α_{T2} = .95). This 14-item scale tapped three broad aspects of subjective mental well-being—emotional or hedonic well-being (affect and life satisfaction; e.g., "I feel happy"), psychological well-being (positive functioning in life; e.g., "my life has a sense of direction or meaning to it"), and social well-being (social functioning; e.g., "I had something important to contribute to society"). Respondents indicated how often each statement had applied to them in the last month, on a 6-point scale (where 0 = *never*, 5 = *every day*). An average score was calculated with higher scores indicating more positive mental well-being.

Life Satisfaction. This was measured with a single item (i.e., "All things considered, how satisfied are you with your life?") taken from the Household, Income, and Labour Dynamics in Australia Survey (HILDA; Watson & Wooden, 2004) and rated on an 11-point scale (0 = *totally dissatisfied*, 10 = *totally satisfied*).[1]

Analytic Strategy

Correlational analysis was used to test the relationships between multiple preretirement group memberships and transition outcomes (H1a). Structural equation modeling in Mplus (Muthén & Muthén, 2017) was then used to test H1b examining the contribution of

multiple group memberships over known demographic predictors on outcomes at T2. To this end, a latent health and well-being factor was constructed at each time point using physical health, mental well-being, and life satisfaction as observed indicators, and allowing auto-covariance among corresponding indicators across waves. The factor loadings and intercepts were constrained to be equal across waves for establishing measurement invariance.[2] To examine change over time, we regressed the T2 latent health and well-being factor on the T1 factor to examine change over time. We included established demographic factors of retirement adjustment that might affect these outcomes; notably, age, gender, education, partnership status, and household income. The T1 predictors were allowed to covary. A latent change score approach was employed in a separate set of sensitivity analyses to take account of multicollinearity between the predictors and the outcomes at T1 (see supplemental Figure 1).

Model fit was evaluated using the comparative fit index (CFI), root-mean-square error of approximation (RMSEA), and standardized root-mean-square residual (SRMR). Following convention, values of CFI > .95, RMSEA < .06, and SRMR < .08 were used to indicate relatively good model fit (Hu & Bentler, 1999). The proportion of missing data was relatively small for all variables (0%−2%), except household income (15%). In all models, missing data were handled using full information maximum likelihood, which is considered comparable to other advanced techniques (e.g., multiple imputation) and more advantageous than traditional procedures (e.g., listwise deletion; Lee & Shi, 2021).

Results

Descriptive statistics and zero-order correlations are presented in Table 2. As the mean data show, respondents rated their strength of connection to preretirement multiple group memberships and to new groups after retirement below the midpoint of the 7-point scale. Their mean strength of connection to the groups they maintained into retirement was at the midpoint. These ratings for multiple and new group memberships were either slightly higher or the same as those reported in a U.S. sample of recent retirees similar in age, gender breakdown, and time since retirement (i.e., 2.74 and 2.81, respectively for multiple and new group membership, respectively; C. Haslam, Lam, et al., 2018, Study 3). Self-reported physical health and mental well-being were rated just above the midpoint of their respective scales. The mean life satisfaction ratings in our sample were at the upper end of the scale and were comparable with that of Australian respondents in 2018 who were aged 60 years and were fully retired (where life satisfaction was 8.25, SD = 1.51; HILDA,

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[1] This separate measure of general life satisfaction was included as while the Mental Health Continuum–Short Form (MHC-SF) has an item using the same phrasing, it is part of a three-item emotional mental well-being subscale and rates frequency of experience, not general satisfaction as is common in standard population studies. This is evident in the correlation between the HILDA and MHC-SF life satisfaction items which was .73 and r = .77 at T1 and T2, respectively, sharing 53% and 59% of the variance and indicating that the two items did not completely overlap. The use of a latent health and well-being factor also accounts for the varying degrees of overlap between the observed indicators by extracting their common variance.

[2] Measurement invariance was tested by comparing configural, metric, and scalar invariance models. Model fit did not change across models. Full scalar invariance was achieved: $\chi^2(43)$ = 12.34, p = .19, CFI = 0.995, RMSEA = 0.047, and SRMR = 0.043.

Table 2
Means, Standard Deviations, and Zero-Order Correlations of Key Measures

Variable	M (SD)	1	2	3	4	5	6	7	8	9
1. T1 multiple group memberships	2.74 (1.56)	—								
2. T2 maintained group memberships	3.89 (1.99)	0.25**	—							
3. T2 new group memberships	2.81 (1.86)	0.57**	0.33**	—						
4. T1 physical health	5.12 (0.82)	0.11	0.17*	0.14	—					
5. T2 physical health	5.22 (0.88)	0.10	0.14	0.11	0.77**	—				
6. T1 mental health	3.02 (1.07)	0.49**	0.30**	0.41**	0.43**	0.33**	—			
7. T2 mental health	3.20 (1.09)	0.46**	0.38**	0.48**	0.35**	0.31**	0.78**	—		
8. T1 life satisfaction	7.23 (2.06)	0.27**	0.33**	0.31**	0.34**	0.33**	0.54**	0.52**	—	
9. T2 life satisfaction	7.30 (1.97)	0.27**	0.35**	0.30**	0.34**	0.39**	0.57**	0.63**	0.79**	—

Note. T = time.
* $p < .05$. ** $p < .01$.

Department of Social Services, Melbourne Institute of Applied Economic and Social Research, 2019).

Tests of Hypotheses

Group Memberships, Demographic Factors, and Health

Correlational data in Table 2 show significant associations, small to moderate in magnitude, between the social group variables which suggest that the more group memberships people had at T1 the more likely they were to both retain these and acquire new memberships at T2. Significant, small to moderately strong, associations were also found between these variables and mental health and life satisfaction, indicating that greater social connectedness was associated with better mental health and well-being. However, there was no association between multiple group membership and physical health; the latter variable was only significantly associated with group maintenance. These findings provide only partial support for H1a, given the evidence of associations with mental health and life satisfaction, but not physical health.

Model results relevant to H1b are summarized in Table 3. Preretirement multiple group memberships were not significantly associated with T2 health and well-being ($b = -0.002$, $p = .968$,

Table 3
Multiple Group Memberships Predicting T2 Health and Well-Being

Variable	b	β
T2 health and well-being		
T1 health and well-being	1.016***	0.967
Age	−0.013	−0.081
Gender	0.020	0.010
Education	0.054	0.026
Partnership	0.189	0.088
Income	−0.134**	−0.195
Multiple group memberships	−0.002	−0.003

Note. T1 = Time 1; T2 = Time 2. Results of model testing a latent health and well-being factor using physical health, mental health, and life satisfaction variables as observed indicators. Model fit: $\chi^2(33) = 52.011$, $p = .019$, CFI = 0.973, RMSEA = 0.058, and SRMR = 0.050. CFI = comparative fit index; RMSEA = root-mean-square error of approximation; SRMR = standardized root-mean-square residual.
** $p < .01$. *** $p < .001$.

$\beta = -0.003$), after controlling for covariates. Latent change score analysis showed similar patterns of results (see supplemental Table 1). Overall, there was little support for H1b, indicating that preretirement multiple group memberships were not a factor in directly predicting health and well-being outcomes 12 months later, after controlling for covariates.[3]

Social Group Continuity and Gain

SIMIC's social identity continuity (H2) and social identity gain pathways (H3) were tested using mediation analysis. In the model, the T2 health and well-being latent factor was regressed on the T1 health and well-being factor, T2 new group memberships, T2 maintained group memberships, T1 multiple group memberships, and the five covariates. T2 maintained group memberships and T2 new group memberships were regressed on T1 multiple group membership and covariates. The error terms for T2 new group memberships and T2 maintained group memberships were allowed to covary, as were the T1 predictors. Indirect effects were tested using bootstrapping with 5,000 samples (Preacher & Hayes, 2008).

The proposed model had acceptable fit (see Figure 2). This showed that T1 multiple group memberships were positively associated with continuity of group memberships (consistent with H2; $b = 0.32$, $p = .001$, $\beta = 0.25$) as well as gain in new group memberships at T2 (consistent with H3; $b = 0.65$, $p < .001$, $\beta = 0.55$). Furthermore, maintained group memberships ($b = 0.06$, $p = .023$, $\beta = 0.12$) and new group memberships ($b = 0.08$, $p = .034$, $\beta = 0.14$) were positively associated with the change in health and well-being. Consistent with H2 and H3, there were indirect effects of multiple group memberships on health and well-being via maintained group membership and new group memberships (indirect effect = 0.02, 95% bias-corrected confidence interval [0.004, 0.05]), and IE = 0.05, 95% CI [0.01, 0.10], respectively, with a nonsignificant direct effect (DE = −0.05, 95% CI [−0.14, 0.05]). The indirect effects were also significant in the latent change score analysis (see supplemental Table 3).

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[3] Results of sensitivity analyses, testing the effect of preretirement multiple group memberships on the three outcomes separately, found no effect for T2 physical health ($b = 0.001$, $p = .960$, $\beta = 0.003$) or life satisfaction ($b = 0.12$, $p = .073$, $\beta = 0.10$), but a significant effect for mental health ($b = 0.10$, $p = .009$, $\beta = 0.15$). See supplemental Table 2.

Figure 2
Results of Mediation Model Testing
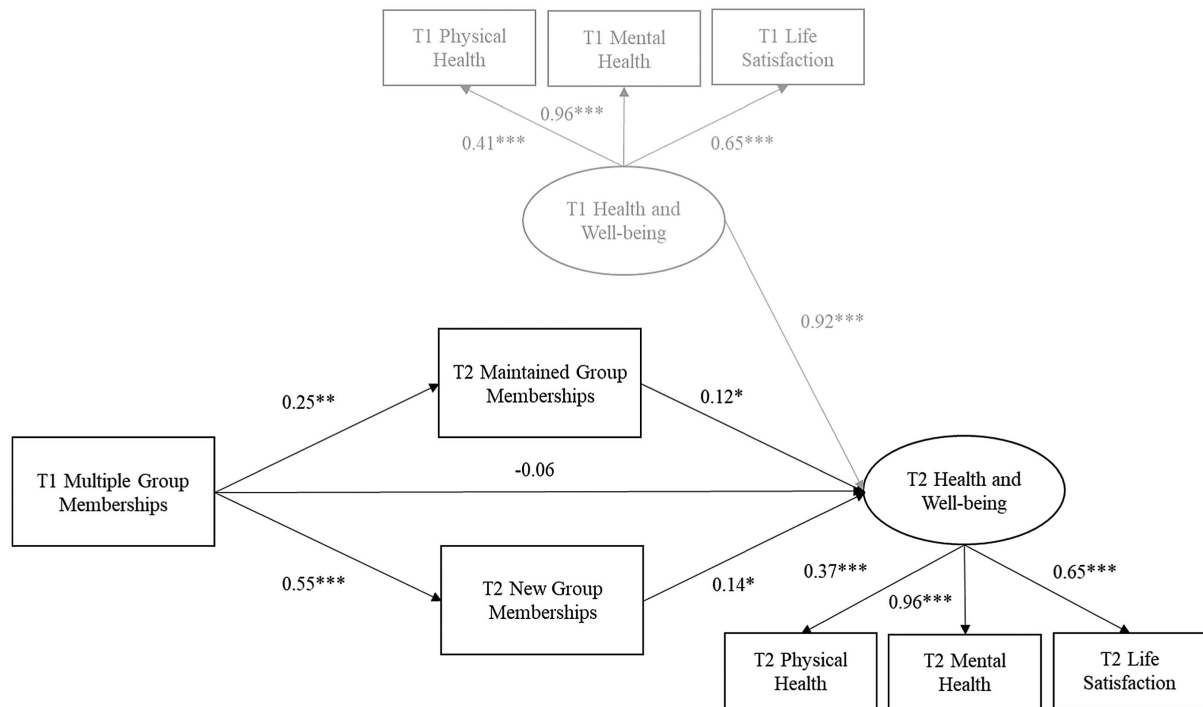
Note. Standardized estimates are presented. T1 = Time 1; T2 = Time 2. Covariations are not presented in the figure but are described in text. Covariates include age, gender, education, partnership status, and household income. Model fit: $\chi^2(43) = 68.67$, $p = .01$, CFI = 0.968, RMSEA = 0.059, and SRMR = 0.059. CFI = comparative fit index; RMSEA = root-mean-square error of approximation; SRMR = standardized root-mean-square residual.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Discussion

The present study sought to advance our understanding of the retirement transition process by providing a test of SIMIC pathways. In particular, it examined the capacity for two pathways—those of social identity continuity and social identity gain—to explain retirement transition outcomes as indexed by measures of physical health, mental health, and life satisfaction.

Results provided some support for three of our four hypotheses. Specifically, partial support was found for H1a, with a stronger sense of connection to multiple groups at Time 1 being correlated with better perceived mental health and life satisfaction, but not perceived physical health. However, there was little support for H1b as multiple group memberships before retirement did not explain significant variance in the latent health and well-being factor after accounting for standard demographic predictors of retirement adjustment. Nevertheless, full support was found for hypotheses concerning the pathways through which multiple group membership exerted its effects on health and well-being; via both continuity (H2) and gain (H3) in group memberships.

As these findings show, preretirement multiple group memberships were indirectly associated with better mental health and life satisfaction 1 year later, as predicted. But they were not important for subjective physical health, nor did they add significantly to the prediction of retirement outcomes over and above established

demographic predictors. This might suggest that people's sense of connection with multiple preretirement groups, in general, is not as important as their sense of connection to particular groups they have gained and maintained in retirement for supporting ongoing outcomes. While we did not test postretirement multiple group memberships as a general construct, given its conceptual overlap with new and maintained groups, this is in line with the reasoning provided by Steffens, Cruwys, et al. (2016). These authors argued that postretirement groups may be more important given the likely loss of meaningful and valued work groups that people experience in the transition. In this context, postretirement groups, and the resources they provide, might also be more accessible than preretirement groups. This was something that Steffens et al. observed in their study, where a decreased number of postretirement group memberships was a better predictor of higher mortality risk than the number of preretirement groups.

There was, however, full support for SIMICs social identity continuity (H2) and social identity gain (H3) pathways on health and well-being. This supports the key propositions of SIMIC in suggesting that multiple group memberships are important for health and well-being in periods of life change through their capacity to provide a platform for people to maintain previously valued group memberships and also to form new ones. This is an important advance in previous research with retirees which had focused solely on the social identity gain pathway (C. Haslam, Lam, et al., 2018).

The present study not only confirms this finding but also points to the importance of maintaining (as well as gaining) group memberships for health and well-being in retirement. Clearly, people may have to let go of groups they value as they transition to retirement (e.g., because they leave professional groups and work teams) and over time (e.g., because they move, or the group members themselves no longer participate due to declining health). Yet where this is the case, our evidence suggests that its impact on health and well-being can be offset by efforts to replenish one's social identity network by acquiring and internalizing new group memberships. Indeed, as SIMIC argues, it appears that the combination of these two social pathways is important in supporting optimal retirement adjustment.

Theoretically, the present data contribute to advances in our understanding of retirement transition outcomes in two important ways. First, they extend previous models of retirement adjustment by showing how social factors influence outcomes. In this regard, the resource-based dynamic model (Wang et al., 2011) and RTAF (Hesketh et al., 2011, 2015) both point to either the importance of social factors or social identity for retirement, but neither details the precise means by which these have their impact. SIMIC fills this gap by specifying the interrelated group processes through which social factors affect subsequent outcomes. In providing support for this model, we therefore provide evidence not only of the beneficial effects of group membership but also of the processes that underpin retirement outcomes—notably, through social group maintenance and gain that helps people to manage identity change in the retirement transition.

Second, the present data extend the social identity literature on life change by providing evidence of the relevance of SIMIC pathways to the retirement context. Thus, in addition to explaining adjustment to a range of life transitions noted in the introduction, this study provides further evidence of the relevance of SIMIC in helping people transition to life after work. In particular, the data show that adjustment can be enhanced if workplaces support people to engage in a form of social identity planning and management directed at strengthening meaningful existing and new group memberships. Along these lines, previous research has examined the contribution that programs aimed at building and sustaining retirees' group memberships and associated social identities make to health and well-being. In particular, one recently developed program—Groups 4 Retirement—builds on the demonstrated efficacy of Groups 4 Health in the clinical domain (Cruwys, Haslam, et al., 2022; C. Haslam, Cruwys, et al., 2019)—and initial research suggests that it has potential to offer an important resource for organizations looking to support retirees with more than just their financial planning (La Rue et al., in press).

Limitations and Suggestions for Future Research

As with all research, the present study has limitations. The first relates to our data collection window. Our sample comprised respondents who had transitioned to retirement in the last 12 months, and this was the key for us to test SIMIC pathways. Closer interrogation in the early weeks and months of the transition would provide more insight into the nature of the social changes people are experiencing, and potentially provide more clues about the role of preretirement multiple group memberships where they may have a greater influence due to being more relevant to people's lives at this point in life change. Accordingly, there is a need for longitudinal studies with a greater number of measurement points to help unpack the dynamics of identity change. Second, and relatedly, extending the longitudinal window to allow for longer follow-up would provide access to additional data points to test the possibility of a bidirectional relationship between group membership and perceived health (that good health increases social engagement, and not only that social engagement supports health). The present findings are, thus, best interpreted in the context of other experimental and longitudinal findings that speak to the direction of these effects (e.g., Cruwys, Fong, et al., 2022; Saeri et al., 2018). Ideally too, future research would also expand the existing evidence base by testing interventions that help people to anticipate and manage social identity change. Another limitation relates to the group membership variables that were used in the present research. While our measures were ones that had been used in previous investigations of SIMIC constructs, they did not allow us to interrogate the contribution of specific types of groups to retirement outcomes, or the importance of either group type (work vs. nonwork groups) or specific facets of groups (e.g., their positivity, support, importance, representativeness). To explore these issues, future research would ideally use group listing measures and/or social identity mapping (Bentley et al., 2020; Cruwys et al., 2016; see also appendix of Haslam, Jetten, et al., 2018). Finally, more demographic details related to participant ethnicity could have better characterized the sample to address wider questions about the generalizability of our findings.

Conclusion

The present study underlines the importance of investing in efforts to build and maintain social relationships when seeking to enhance retirement transition outcomes. In particular, it advances theory and evidence by pointing to the particular role played by social group processes in protecting health and well-being in retirement and highlights the specific mechanisms of social identity continuity and social identity gain through which this is achieved. The findings here are especially relevant in the context of the enormous investment made by governments and organizations to help employees engage in retirement preparation such as financial planning. This type of preparation is undoubtedly important but as our research and that of others (e.g., Hesketh et al., 2015; Kalbarczyk & Łopaciuk-Gonczaryk, 2022; Wang et al., 2011) show, social factors are also key contributors to retirement outcomes that warrant investment to enhance people's experience of the transition. Accordingly, we would suggest there is a pressing need to supplement traditional financial planning with social planning that uses theory-informed intervention to support employees in the retirement transition. With growing evidence of the importance of these social factors, we are doing retirees a disservice if we fail to develop, test, and deliver such programs in order to supplement current offerings.

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