

Relationship between Psychological Well-Being and Prevention Behaviors in Public Health: A Cross-Sectional Analysis in the Adult Population

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Summary

Psychological well-being is a relevant resource for understanding the adoption of preventive behaviors in public health, especially in the adult population exposed to multiple work, family, and health demands. The aim of the study was to analyze the relationship between psychological well-being and prevention behaviors in public health in adults. A quantitative, observational, analytical, and cross-sectional study was designed with a realistic simulated sample of 624 adults between 18 and 65 years of age. Psychological well-being was assessed using a scale based on Ryff's multidimensional model and preventive behaviors were assessed using a composite index of biomedical, hygienic-sanitary, informational and lifestyle prevention. Descriptive analyses, Pearson correlations, ANOVA by tertiles of well-being, and multiple linear regression adjusted for sociodemographic variables, chronic disease, risk perception, and health literacy were performed. The results showed a moderate positive association between global psychological well-being and preventive behaviors ($r = .46$, $p < .001$). The dimensions with the greatest relationship were life purpose, mastery of the environment and self-acceptance. The ANOVA showed significant differences in preventive behaviors according to the level of psychological well-being, with higher scores in the high well-being group. In multiple regression, psychological well-being maintained a significant predictive effect on preventive behaviors ($\beta = .31$, $p < .001$), even after controlling for covariates. It is concluded that psychological well-being can function as a psychosocial resource associated with prevention in public health. Preventive interventions should integrate health literacy, realistic risk perception, and strengthening positive psychological resources.

Keywords

Psychological well-being; preventive behaviors; public health; health literacy; adult population; Cross-sectional study.

Introduction

Contemporary public health has moved from a paradigm focused exclusively on disease reduction to a broader approach aimed at promoting well-being, risk prevention, and strengthening individual and collective capacities. This change has been reinforced by the World Health Organization, which

in 2023 adopted a global framework to integrate well-being into public health through a health promotion perspective, emphasizing the need to build societies capable of promoting healthy, equitable and sustainable living conditions (World Health Organization [WHO], 2023). In this framework, psychological well-being is no longer understood only as the absence of emotional distress and becomes a positive resource for healthy decision-making, behavioral self-regulation, and active participation in preventive practices.

Psychological well-being is a central dimension of positive mental health. From the eudaimonic tradition, this construct refers to the optimal functioning of the person and includes dimensions such as autonomy, self-acceptance, positive relationships, personal growth, mastery of the environment, and purpose in life (Ryff, 1989; Ryff, 2014). Unlike subjective well-being, which usually emphasizes life satisfaction and positive affect, psychological well-being is oriented towards the development of human potential and the ability to cope with vital demands in an adaptive way. This distinction is relevant for public health, since preventive behaviors do not depend only on available information or access to services, but also on psychological resources that facilitate planning, persistence, perception of control, and orientation towards long-term goals.

Prevention in public health includes a broad set of behaviors aimed at reducing the likelihood of disease, disability, or premature death. Among these behaviors are vaccination, attending medical check-ups, hand hygiene, responsible use of health information, practicing physical activity, healthy eating, adequate rest, and adherence to recommendations issued by health authorities. The World Health Organization has noted that health promotion and disease prevention require strengthening health literacy, community participation, and the social conditions that allow healthy choices to be accessible and sustainable (WHO, 2022, 2023). Therefore, studying the psychological determinants of prevention is relevant to design more comprehensive interventions.

Recent evidence has shown that healthy and preventive behaviors are closely related to indicators of well-being and mental health. Cross-sectional and longitudinal studies have found associations between physical activity, sleep, healthy diet, and higher levels of subjective or psychological well-being in adults and young adults (Buecker et al., 2021; Márquez et al., 2020; Wickham et al., 2020). In addition, research conducted during and after the COVID-19 pandemic suggests that preventive behaviors not only reduce epidemiological risks, but can also interact with emotional variables, threat perception, resilience, and a sense of coherence (Kavčič et al., 2022; Li et al., 2023; Yıldırım et al., 2022). These findings support the idea that well-being and prevention are not separate dimensions, but rather interlinked processes.

However, the relationship between psychological well-being and prevention behaviors in public health continues to be a field with important gaps. First, much of the available evidence has focused on preventive behaviors related to COVID-19, such as mask-wearing, physical distancing, or vaccination, limiting the understanding of prevention as a broader, everyday repertoire of healthy behaviors (Bish & Michie, 2010; Li et al., 2023; Yıldırım et al., 2022). Second, many studies have evaluated negative symptoms such as anxiety, depression or stress, but have paid less attention to positive indicators of psychological functioning. Thirdly, research tends to analyse isolated behaviours and not integrated prevention indices, which makes it difficult to identify general patterns of self-care and health responsibility in the adult population.

From a theoretical perspective, it is plausible to argue that people with greater psychological well-being have greater adherence to preventive behaviors. The dimension of life purpose can favor the assessment of long-term health goals; mastery of the environment can facilitate the organization of healthy routines; autonomy can contribute to informed decisions in the face of social pressures or misinformation; and positive relationships can strengthen norms of mutual care and social support (Ryff, 2014; Steptoe, 2019). Likewise, self-acceptance and personal growth can promote a more

favorable disposition towards self-care, not as an external obligation, but as part of a coherent life project.

The importance of this problem increases in a context where health systems are simultaneously facing communicable diseases, non-communicable diseases, social inequalities, population aging and the persistent effects of recent health crises. The WHO has stressed that public health systems must be oriented towards societies of well-being, integrating mental health, equity, sustainability, and prevention at all levels of decision-making (WHO, 2023). In this sense, identifying psychological factors associated with prevention would allow for the design of more effective strategies that are not limited to transmitting information, but that strengthen internal resources and social conditions to sustain healthy behaviors.

In the adult population, this relationship is especially relevant because adulthood concentrates multiple family, work and community responsibilities that can favor or limit the adoption of preventive behaviors. Adults often make decisions not only about their own health, but also about the health of children, the elderly, or dependent family members. In addition, in this group, risks associated with chronic diseases, sedentary lifestyle, work stress, inadequate diet and delay in seeking preventive care accumulate. Therefore, understanding how psychological well-being is linked to prevention practices can contribute to health promotion interventions that are more sensitive to the psychosocial reality of adults.

Although health literacy and risk perception have been widely studied as predictors of preventive behaviors, psychological well-being could offer an additional explanation for why some people maintain healthy behaviors even in contexts of uncertainty, information fatigue, or structural barriers. Recent research has pointed out that variables such as resilience, hope, social support, and healthy lifestyle are associated with well-being and quality of life, suggesting the existence of interdependent psychological and behavioral pathways (Arslan & Yildirim, 2021; Super et al., 2022; Zhang et al., 2024). However, empirical models are required that integrate psychological well-being, preventive behaviors, and sociodemographic covariates in the same analytical structure.

The present study aims to respond to this gap through a cross-sectional analysis in the adult population, aimed at estimating the relationship between psychological well-being and prevention behaviors in public health. It is assumed that psychological well-being is not only a desirable outcome of health policies, but also a possible psychosocial determinant of prevention. This perspective coincides with contemporary approaches to positive public health, which propose that psychological capacities, social ties, and healthy living conditions should be considered strategic components of prevention and not peripheral dimensions of the health system (WHO, 2022, 2023).

The expected contribution of the study is threefold. First, it offers quantitative evidence on the association between psychological well-being and a broad index of preventive behaviors in adults. Second, it identifies which dimensions of psychological well-being have the greatest explanatory weight on prevention. Third, it proposes a model adjusted for sociodemographic and health variables that can guide future health promotion interventions. In this way, the work seeks to contribute both to the scientific literature on positive mental health and to the design of preventive policies focused on psychosocial resources.

General objective

To analyze the relationship between psychological well-being and prevention behaviors in public health in the adult population through a quantitative, observational, analytical, and cross-sectional design.

Specific objectives

1. To describe the levels of psychological well-being and the frequency of preventive behaviors in public health in a sample of adults.

2. To estimate the bivariate association between global psychological well-being, its dimensions and preventive behaviors.
3. To compare the frequency of preventive behaviors according to low, medium, and high levels of psychological well-being.
4. To assess whether psychological well-being significantly predicts preventive behaviors after controlling for age, sex, educational level, chronic disease, risk perception, and health literacy.

Hypothesis

H1. There is a positive and statistically significant association between global psychological well-being and prevention behaviors in public health.

H2. The dimensions of life purpose, mastery of the environment and self-acceptance will be more strongly associated with preventive behaviors than the other dimensions of psychological well-being.

H3. Global psychological well-being will maintain a significant predictive effect on preventive behaviors even after adjusting for sociodemographic variables, health condition, and health literacy.

2. Theoretical framework and literature review

2.1. Psychological well-being: conceptual foundations

Psychological well-being is one of the central constructs of positive psychology and contemporary public health, because it allows us to understand mental health from a perspective oriented to optimal human functioning and not only from the absence of psychopathology. In Ryff's eudaimonic model, psychological well-being is organized into six dimensions: autonomy, mastery of the environment, personal growth, positive relationships with others, purpose in life, and self-acceptance (Ryff, 1989, 2014). This approach is especially useful for the present study because it allows us to analyze relatively stable psychological resources that could facilitate the adoption of preventive behaviors, such as planning, self-care, personal responsibility, and orientation towards long-term health goals. Recent literature continues to recognize the validity of Ryff's multidimensional model and its usefulness for studying positive psychological capacities in mental health and clinical practice (Ryff, 2023).

Unlike subjective well-being, which focuses mainly on life satisfaction and the presence of positive affects, psychological well-being emphasizes the development of human potential, the integration of the self, the ability to build meaningful bonds and the perception of vital meaning. This difference is relevant for public health because many preventive behaviors require sustained efforts that do not always produce immediate rewards, such as attending medical check-ups, maintaining regular physical activity, completing vaccination schedules, sleeping adequately or modifying eating habits. Consequently, eudaimonic dimensions can act as motivational and self-regulatory resources to sustain prevention-oriented behaviors (Ryff, 2014; Steptoe, 2019; Zuccarella-Hackl et al., 2024).

The incorporation of well-being into public health has become more relevant in recent years. The World Health Organization approved a global framework to integrate well-being into public health through a health promotion approach, with the purpose of moving towards societies that allow people to reach their physical and mental potential throughout the life course (World Health Organization [WHO], 2024). This approach shifts attention from exclusively clinical interventions to multisectoral strategies that include social conditions, healthy environments, equity, community participation, and individual and collective capacity building. Therefore, psychological well-being should not be interpreted only as an individual outcome, but as a strategic component of health promotion and population prevention.

In the field of positive public health, psychological well-being can be understood as an intermediate psychosocial determinant between social living conditions and preventive behavior. People with a greater perception of purpose, self-acceptance, and mastery of the environment may experience a greater sense of agency in their health, which favors the adoption of protective behaviors. This

premise coincides with recent reviews that place positive well-being, resilience, vitality, and a sense of purpose as factors associated with better indicators of physical health, cardiovascular health, and healthy behaviors (Steptoe, 2019; Zuccarella-Hackl et al., 2024).

2.2. Prevention behaviors in public health

Prevention behaviors in public health include individual and collective practices aimed at reducing the risk of disease, disability, or premature death. These practices include classic primary prevention actions, such as vaccination, hand hygiene, healthy eating, physical activity, adequate rest and reduction of exposure to risks; secondary prevention actions, such as medical check-ups, screenings and early detection; and informational behaviors, such as consulting reliable health sources and avoiding misinformation. In contemporary terms, prevention cannot be limited to avoiding infectious diseases, but must integrate non-communicable diseases, mental health, self-care, health literacy, and the ability to respond to health emergencies (WHO, 2024; Rincón Uribe et al., 2021).

The COVID-19 pandemic strengthened scientific interest in the determinants of preventive behaviors, especially in relation to vaccination, use of masks, hand hygiene, physical distancing, and search for health information. However, a frequent limitation of this literature is that much of the evidence focused on behaviors associated with a specific epidemiological emergency, without sufficiently considering the daily preventive repertoires that are relevant to long-term public health. For this reason, the present study proposes a broad index of preventive behaviors that includes infectious, non-infectious, informational, and general self-care practices, seeking to capture prevention in the adult population in a more comprehensive way (Bish & Michie, 2010; Rincón Uribe et al., 2021; Ma et al., 2023).

The adoption of preventive behaviors depends on multiple factors: health knowledge, risk perception, institutional trust, social norms, access to services, motivation, self-efficacy and material conditions. A systematic review of health knowledge during pandemic emergencies found that health knowledge favors the adoption of preventive behaviors and attitudes, although its effect depends on the clarity of information, the sociocultural context, and the ability to translate knowledge into action (Rincón Uribe et al., 2021). This indicates that the information is necessary, but insufficient; Prevention also requires psychological and social resources that allow healthy decisions to be made in the face of barriers, uncertainty or behavioural fatigue.

In the adult population, preventive behaviors acquire particular relevance because adulthood is characterized by the coexistence of work, family, and community responsibilities that can facilitate or restrict self-care. In addition, cumulative exposure to risk factors associated with cardiovascular disease, diabetes, cancer, musculoskeletal disorders, and mental health deterioration increases at this stage. Preventive practices not only reduce individual risk, but also reduce the burden on health services, improve social productivity and support the sustainability of health systems. Therefore, identifying psychosocial predictors of prevention in adults is a priority for more cost-effective and humanized population-based interventions (WHO, 2024; Steptoe, 2019).

2.3. Relationship between psychological well-being and preventive behaviours

The relationship between psychological well-being and preventive behaviors can be explained from a bidirectional logic. On the one hand, people with greater psychological well-being could have more internal resources to adopt healthy behaviors; on the other hand, the sustained practice of preventive behaviors could strengthen well-being through greater perception of control, better physical health, reduction of uncertainty, and coherence with personal goals. This bidirectionality has been observed in longitudinal research on life purpose and physical activity, where greater purpose predicted greater future physical activity, while physical activity was also associated with subsequent increases in life purpose (Sutin et al., 2021).

The dimension of purpose in life is one of the most relevant to explain prevention. People with greater purpose tend to organize their decisions based on meaningful goals, which can increase the

willingness to take care of their health and avoid risks that compromise future projects. Studies in older adults have reported that life purpose is related to greater use of preventive services, greater intention to perform protective behaviors, and better adherence to health recommendations during public health crises (Kim et al., 2014; Kang et al., 2021; Ma et al., 2023). In a longitudinal study with older adults in the United States, pre-pandemic purpose was subsequently associated with greater adoption of protective behaviors during the COVID-19 pandemic, suggesting that purpose may operate as an anticipatory resource in the face of health threats (Ma et al., 2023).

Mastery of the environment can also contribute to prevention because it involves the perceived ability to handle daily demands, organize routines, and create favorable conditions for self-care. A person with high command of the environment could plan schedules for physical activity, select healthier foods, attend medical check-ups or seek reliable information more effectively. From this perspective, mastery of the environment is close to concepts such as self-efficacy and perceived control, widely used in models of health behavior. Recent reviews have indicated that self-efficacy, motivation, health literacy, risk perception, and social support are psychological competencies consistently associated with physical activity, healthy eating, health information seeking, and preventive practices (Bandura, 1997; Michie et al., 2011; Fernández-Río et al., 2026).

Self-acceptance, on the other hand, can be related to preventive behaviors through a more positive and compassionate assessment of one's own body and one's life trajectory. When the person maintains a less punitive relationship with themselves, self-care is more likely to be interpreted as a protective practice and not as an external imposition or a response to fear. Although this route has been less researched than life purpose or self-efficacy, evidence on positive well-being and physical health suggests that positive psychological resources are linked to better lifestyles, less exposure to risky behaviors, and better indicators of cardiometabolic health (Ryff, 2014; Steptoe, 2019; Zuccarella-Hackl et al., 2024).

Positive relationships with others are another relevant dimension, especially since many preventive behaviors have a social dimension. Getting vaccinated, using hygiene measures, avoiding unnecessary exposure to communicable diseases or promoting healthy habits at home are actions that not only protect the individual, but also their family and community network. Social support can facilitate prevention through emotional accompaniment, behavioral modeling, shared norms, and access to reliable information. Evidence on physical activity and mental health shows that social support, social connectedness, resilience, and self-efficacy are important mediators of the effects of physical activity on mental health outcomes, reinforcing the idea that healthy behavior is best sustained in favorable relational contexts (White et al., 2024).

2.4. Explanatory theoretical models

The Health Belief Model states that preventive behavior depends on perceived susceptibility, perceived severity, expected benefits, perceived barriers, keys to action, and self-efficacy (Rosenstock, 1974; Janz & Becker, 1984). From this model, psychological well-being could influence prevention by modifying the way people interpret risks, benefits, and barriers. For example, a person with greater mastery of the environment and perceived self-efficacy may consider the barriers to attending a check-up or initiating physical activity to be manageable, while a person with low well-being may experience those same barriers as more threatening or difficult to overcome. Recent studies on risk perception and preventive adherence during COVID-19 have shown that models based on health beliefs continue to be useful in explaining the adoption of health recommendations (Rosenstock, 1974; Zareipour et al., 2021).

The Theory of Motivation for Protection holds that people adopt protective behaviors when they assess a threat as serious and probable, and when they consider that the preventive response is effective and feasible (Rogers, 1983). This theory allows the integration of risk perception and psychological resources: it is not enough to perceive threat; it is also necessary to believe that it is

possible to act effectively. Psychological well-being may strengthen coping assessment by promoting a sense of control, purpose, and behavioral persistence. During health emergencies, studies have used this theory to explain how risk perception and coping assessment influence preventive behaviors and general well-being outcomes (Rogers, 1983; Wang et al., 2023).

Social Cognitive Theory provides another relevant framework by highlighting the reciprocal interaction between personal factors, behavior and environment. According to Bandura, self-efficacy is a central mechanism for initiating and maintaining healthy behaviors, as it influences effort, persistence, and recovery from obstacles (Bandura, 1986, 1997). From this approach, psychological well-being can be understood as a set of personal resources that increase the probability of transforming preventive intentions into concrete actions. This perspective is consistent with recent findings that identify self-efficacy, motivation, and social support as factors associated with healthy behaviors, particularly physical activity, diet, information-seeking, and preventive practices (Bandura, 1997; Fernández-Río et al., 2026).

The COM-B model, on the other hand, proposes that behavior occurs when there is sufficient capacity, opportunity, and motivation (Michie et al., 2011). This model is especially useful for public health because it allows prevention to be analyzed not only as an individual decision, but as a result of competencies, environments, and motivational processes. In the present study, psychological well-being is mainly located in the motivational dimension and partially in psychological capacity, while variables such as health literacy and risk perception function as complementary cognitive factors. Recent evidence on behavioral change in health highlights that maintaining prolonged preventive behaviors simultaneously requires skills, opportunities, and motivation, especially when there is behavioral fatigue or information saturation (Michie et al., 2011; Kelly & Barker, 2016).

2.5. Health literacy, risk perception, and sociodemographic covariates

Health literacy is a key variable in understanding preventive behaviors, as it allows access, understanding, evaluation, and use of health information to make appropriate decisions. In contexts of information overload, health literacy not only involves knowing data, but also distinguishing reliable sources, interpreting recommendations, and avoiding the influence of misinformation. A systematic review of health knowledge in pandemic emergencies reported that people with greater health knowledge are more likely to adopt protective and preventive behaviors, although the authors warn that the relationship may vary depending on the context, the type of population, and the quality of health communication (Rincón Uribe et al., 2021).

Media literacy in health has also gained relevance, especially due to the expansion of social networks and digital platforms as sources of health information. Recent research has proposed instruments to measure media literacy in adults and has found associations between higher literacy scores and better health behaviors, including seeking reliable information and adopting preventive practices (Ashtari & Recchia, 2025). In the present study, this variable will be considered a relevant covariate because it could explain part of the relationship between psychological well-being and prevention: a person with greater well-being may seek information with greater confidence, but the quality of their decisions will also depend on their ability to critically evaluate this information.

Risk perception represents another central component of prevention models. People tend to adopt protective behaviors when they perceive a threat to be relevant, probable, and potentially serious; however, an excessive perception of threat can produce anxiety, avoidance or fatigue, while too low a perception can reduce preventive adherence. Therefore, the effect of risk perception should not be analyzed in isolation, but in interaction with self-efficacy, confidence, psychological well-being and social support. Studies on adherence to preventive recommendations during COVID-19 showed that risk perception is associated with greater compliance with health measures, although its impact depends on beliefs, motivation, and coping ability (Zareipour et al., 2021; Rincón Uribe et al., 2021).

Sociodemographic variables can also modify the relationship between psychological well-being and prevention. Age, sex, educational level, income, presence of chronic disease and access to health services influence real opportunities for self-care. For example, a person with high psychological well-being but low access to services may encounter structural barriers to preventive check-ups; while a person with chronic disease may present greater preventive motivation due to frequent clinical follow-up. For this reason, the present study will statistically control for sociodemographic and health variables, in order to estimate whether psychological well-being maintains an independent association with preventive behaviors. This methodological decision aligns with previous studies that have adjusted protective behavior models for age, gender, health status, and other contextual factors (Ma et al., 2023; Kim et al., 2014).

2.6. Recent empirical evidence

Recent empirical evidence supports a positive relationship between psychological resources and healthy behaviors. In older adults, life purpose has been related to greater use of preventive services and a greater likelihood of adopting protective behaviors during health crisis situations (Kim et al., 2014; Kang et al., 2021; Ma et al., 2023). The study by Ma et al. (2023), based on data from the Health and Retirement Study, found that purpose in life mediated the relationship between loneliness and protective behaviors in a cross-sectional way, and that pre-pandemic purpose was longitudinally associated with greater adoption of protective behaviors during the pandemic. These findings are relevant because they suggest that psychological well-being not only accompanies prevention, but can precede it temporally.

There is also evidence of an association between well-being and healthy lifestyles. A systematic review on physical activity and mental health identified strong evidence for mediators such as affection, well-being, self-esteem, self-efficacy, resilience, social support, and social connection, indicating that healthy behaviors and psychological resources influence each other (White et al., 2024). In terms of the present study, this justifies the inclusion of physical activity in the prevention index, but it also warns that the relationship between well-being and prevention can be reciprocal and complex, especially in cross-sectional designs where causality cannot be established.

Sense of purpose has shown specific associations with physical activity in large longitudinal studies. Sutin et al. (2021) found, in two national panels of middle-aged and older adults in the United States, that increases in life purpose were associated with greater future physical activity and that physical activity also predicted later levels of purpose. This result is particularly important because it supports the hypothesis that certain dimensions of psychological well-being can function as behavioral antecedents, but also as positive consequences of sustained healthy habits.

The available evidence also suggests that positive psychological well-being may be linked to better physical health outcomes and lower cardiometabolic risk. Recent reviews have noted that positive psychological health, including optimism, purpose, vitality, and resilience, is associated with better cardiovascular health in both the general population and people with cardiovascular disease (Zuccarella-Hackl et al., 2024). Although these studies do not always directly analyze preventive behaviors as a dependent variable, they offer a plausible framework for understanding how well-being can be linked to self-care decisions, adherence to clinical recommendations, and protective lifestyles.

However, the literature maintains important limitations. First, many studies focus on the elderly population or in pandemic contexts, so it is necessary to expand the evidence to the general adult population and preventive behaviors not restricted to COVID-19. Second, there is a predominance of cross-sectional studies, which makes it difficult to establish causal directionality. Third, research typically measures a single dimension of well-being, primarily life purpose or life satisfaction, without incorporating Ryff's multidimensional model. Fourth, preventive behaviors are often evaluated in a fragmented manner, for example, vaccination or physical activity separately, without

constructing integrated indices. These gaps justify the present cross-sectional study, whose purpose is to analyze the relationship between global psychological well-being, its dimensions, and a broad prevention index in the adult population (Ryff, 2014; Ma et al., 2023; White et al., 2024).

2.7. Conceptual model of the study

The proposed conceptual model argues that global psychological well-being is positively associated with prevention behaviors in public health. This relationship is based on the idea that people with greater autonomy, life purpose, mastery of the environment, self-acceptance, personal growth and positive relationships have greater resources to make healthy decisions, properly interpret risks, maintain preventive routines and respond adaptively to health recommendations. In the model, psychological well-being operates as the main predictor, preventive behaviors as a dependent variable, and sociodemographic variables, risk perception, health literacy, and chronic disease as control covariates (Ryff, 1989, 2014; Bandura, 1997; WHO, 2024).

The central hypothesis posits that psychological well-being will have a positive and significant association with preventive behaviors even after statistical adjustment for covariates. Life purpose, mastery of the environment and self-acceptance are expected to present the strongest associations, since these dimensions are directly linked to goal orientation, personal organization capacity and appreciation of self-care. Likewise, it is expected that health literacy and risk perception will contribute significantly to the model, but not completely eliminate the effect of psychological well-being, which would indicate that prevention depends on both information and perceived risk and positive psychological resources (Rincón Uribe et al., 2021; Ma et al., 2023; Sutin et al., 2021).

From an applied perspective, this model allows for the foundation of public health interventions that integrate wellness promotion and behavioral prevention. If psychological well-being is more often associated with preventive practices, health campaigns could benefit from strategies that do not merely communicate risks, but strengthen purpose, self-efficacy, social bonds, self-regulation, and a sense of control. This is in line with the WHO framework on welfare societies, which proposes to integrate health promotion, equity, social participation, and human capacities to improve health outcomes across the life course (WHO, 2024).

Summary of the review

The literature reviewed allows us to conclude that psychological well-being is a multidimensional construct with theoretical and empirical relevance to explain prevention behaviors in public health. The dimensions of life purpose, mastery of the environment, self-acceptance, and positive relationships offer plausible routes to understanding why some people adopt and sustain preventive practices more regularly. At the same time, variables such as health literacy, risk perception, self-efficacy, social support, and sociodemographic conditions influence the real possibility of transforming preventive intention into behavior. Consequently, the present study is justified by the need to analyse in an integrated way the association between psychological well-being and a broad index of preventive behaviours in the adult population through a cross-sectional quantitative design adjusted for relevant covariates (Ryff, 2014; Rincón Uribe et al., 2021; Ma et al., 2023; White et al., 2024; WHO, 2024).

3. Methodology

3.1. Study design

The study was designed as a quantitative, observational, analytical, and cross-sectional research. A cross-sectional design was adopted because the purpose was to estimate the association between psychological well-being and prevention behaviors in public health at a specific time, without experimental manipulation of variables or longitudinal follow-up. This design is relevant when seeking to describe population patterns, explore associations between psychosocial and health variables, and generate preliminary explanatory models that can guide subsequent longitudinal studies. The methodological structure of the manuscript will be organized following the

recommendations of the STROBE statement for observational studies, which includes a specific list of items for reporting cross-sectional studies in a transparent manner, including eligibility criteria, participant selection, definition of variables, data sources, and statistical methods.

The quantitative approach is justified because the main variables of the study, psychological well-being and prevention behaviors, can be operationalized by means of psychometric scales and composite scores. In addition, the design allows for descriptive, correlational, comparative and predictive analyses, which are necessary to evaluate the hypotheses raised. Since the objective is not to understand deep subjective meanings, but to estimate the magnitude and direction of associations between variables, a qualitative or mixed approach was not selected.

For academic writing and methodological modeling purposes, the study is presented with realistic simulated data. This means that the numerical values that will be presented in the results section do not come from a real empirical collection, but will be constructed in a coherent way with patterns expected in the scientific literature on psychological well-being, health literacy and preventive behaviors. This decision should be explicitly stated to avoid attributing real empirical character to data generated for demonstration purposes.

3.2. Population and sample

The target population was made up of adults aged 18 to 65 years, living in urban and peri-urban contexts, with the capacity to respond autonomously to a structured online questionnaire. The adult population was considered because this group concentrates a significant proportion of preventive decisions related to self-care, vaccination, medical check-ups, physical activity, food, rest, and search for health information. In addition, adulthood is a stage of the life cycle in which work, family and community responsibilities are combined that can influence both psychological well-being and the adoption of preventive behaviors.

The projected sample was 624 participants. This sample size is considered sufficient to perform correlation analysis, group comparison, and multiple linear regression with several covariates. As a general criterion, regression models require an adequate number of participants per predictor to avoid unstable estimates and loss of statistical power. In this study, it is expected to include between eight and ten predictors in the adjusted models, so a sample of more than 500 participants allows for more robust estimates, narrower confidence intervals and analysis by sociodemographic subgroups. The sampling will be non-probabilistic by quotas, seeking approximate balance by sex, age group and educational level. Although this type of sampling does not allow the generalization of the findings with the same force as a probability sampling, it is common in cross-sectional studies applied to the adult population when online surveys are used. To reduce composition biases, minimum quotas will be established by age, sex and education, avoiding an excessive concentration of young participants, highly educated or belonging to a single occupational profile.

3.3. Inclusion and exclusion criteria

The inclusion criteria will be: to be between 18 and 65 years old, to accept informed consent, to understand the Spanish language, to reside in an urban or peri-urban area and to complete at least 90% of the questionnaire. These criteria seek to ensure that participants can understand the items, respond autonomously, and provide sufficient information for statistical analyses.

The exclusion criteria will be: report a current diagnosis of severe cognitive impairment, answer the questionnaire in an extremely short time incompatible with careful reading, present invariable response patterns in more than 90% of the items or duplicate responses from the same digital identifier. These criteria are incorporated to improve data quality, decrease the risk of automatic or invalid responses, and preserve the internal consistency of the scales used.

3.4. Study variables

The main independent variable will be global psychological well-being. This construct will be defined as the degree to which the person perceives positive psychological functioning in terms of autonomy,

mastery of the environment, personal growth, positive relationships, life purpose, and self-acceptance. The conceptualization will be based on the Ryff model, widely used to assess eudaimonic psychological well-being in psychological and health research. Ryff's psychological well-being scale assesses precisely these six dimensions, and there are short versions used in survey research, with Likert-type response formats.

The dependent variable will be the index of prevention behaviors in public health. This index will be defined as the self-reported frequency of practices aimed at reducing health risks and promoting health. It will include behaviors such as updated vaccination, hand hygiene, use of preventive services, medical check-ups, seeking information from reliable sources, physical activity, healthy eating, adequate sleep, and adherence to health recommendations. The inclusion of these behaviors is based on a broad conception of prevention, consistent with the WHO framework of well-being, which integrates health promotion, disease prevention, and conditions that favor the development of physical and mental potential throughout life.

The covariates will be age, sex, educational level, perceived income, presence of chronic disease, perception of health risk and health literacy. Health literacy will be included because the ability to access, interpret, and use health information has been linked to better preventive decisions. Recent studies on media literacy in health have found associations between higher levels of literacy and preventive behaviors in adults, especially in contexts where people must distinguish reliable information from ambiguous or misinformation health content.

3.5. Instruments

To measure psychological well-being, an abbreviated version of the Ryff Psychological Well-being Scales will be used, composed of 42 items distributed in six dimensions: autonomy, mastery of the environment, personal growth, positive relationships, purpose in life and self-acceptance. Each item will be answered on a six-point Likert scale, ranging from 1 = strongly disagree to 6 = strongly agree. Higher scores will indicate greater psychological well-being. The choice of this scale is justified because Ryff's model allows us to analyze well-being as a multidimensional construct and not only as life satisfaction or positive affect.

The index of prevention behaviors in public health will be constructed using a 24-item scale developed for the study, organized into four dimensions: biomedical prevention, hygienic-sanitary prevention, lifestyle-related prevention, and informational prevention. Each item will be answered on a five-point Likert scale, from 1 = never to 5 = always. The overall score will be obtained by averaging the items, so that higher values reflect a higher frequency of preventive behaviors. Prior to the main analysis, the internal consistency of the index will be evaluated using Cronbach's alpha and McDonald's omega.

The perception of health risk will be measured using a brief five-item scale, aimed at estimating the subjective perception of vulnerability to preventable diseases, perceived severity of health problems and personal relevance of health recommendations. This variable will be included because classic models of health behavior, such as the Health Belief Model and the Theory of Motivation for Protection, maintain that threat perception and effectiveness evaluation influence the adoption of preventive behaviors.

Health literacy will be assessed using a brief eight-item scale, focusing on self-reported ability to search, understand, assess, and apply health information. Questions will be included on understanding medical recommendations, identifying reliable sources, interpreting public health campaigns, and ability to make preventive decisions. The inclusion of this variable responds to recent evidence that indicates that media and health literacy is associated with better preventive behaviors in adults.

Table 1. Operationalization of study variables and instruments

<i>Variable</i>	<i>Type</i>	<i>Operational definition</i>	<i>Instrument</i>	<i>Response Scale</i>	<i>Analytical indicator</i>
<i>Global psychological well-being</i>	Independent	Average of the six dimensions of eudaimonic psychological well-being	Abbreviated Ryff scale, 42 items	Likert 1–6	Global mean and averages by dimension
<i>Autonomy</i>	Secondary Independent	Perceived ability to act independently and self-regulate	Ryff Subscale	Likert 1–6	Subscale Mean
<i>Mastery of the environment</i>	Secondary Independent	Perceived ability to organize the environment and handle everyday demands	Ryff Subscale	Likert 1–6	Subscale Mean
<i>Personal Growth</i>	Secondary Independent	Perception of continuous development and openness to new experiences	Ryff Subscale	Likert 1–6	Subscale Mean
<i>Positive relationships</i>	Secondary Independent	Perceived quality of affective bonds and interpersonal support	Ryff Subscale	Likert 1–6	Subscale Mean
<i>Life purpose</i>	Secondary Independent	Sense of direction, goals, and meaning in life	Ryff Subscale	Likert 1–6	Subscale Mean
<i>Self-acceptance</i>	Secondary Independent	Positive self-evaluation and acceptance of personal trajectory	Ryff Subscale	Likert 1–6	Subscale Mean
<i>Preventive behaviors</i>	Dependent	Frequency of self-care, biomedical prevention, hygiene, lifestyle and health information practices	Preventive Behaviors Index, 24 items	Likert 1–5	Media global
<i>Risk perception</i>	Covariable	Perceived vulnerability and severity to preventable diseases	Brief risk scale, 5 items	Likert 1–5	Media global
<i>Health literacy</i>	Covariable	Ability to search, understand, and apply health information	Brief Literacy Scale, 8 items	Likert 1–5	Media global

<i>Chronic disease</i>	Covariable	Report of previous medical diagnosis of chronic disease	Sociodemographic question	Yes/No	Dichotomous variable
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3.6. Data collection procedure

Data collection will be carried out through a self-administered digital questionnaire. The link will be disseminated by email, institutional social networks and community groups. Before starting the questionnaire, participants will read an informed consent form explaining the objectives of the study, the voluntary nature of participation, the absence of financial compensation, the confidentiality of the answers and the possibility of withdrawing before sending the form.

The questionnaire will be organized into five blocks. The first block will collect sociodemographic information; the second will evaluate psychological well-being; the third will measure preventive behaviors; the fourth will include risk perception and health literacy; and the fifth will incorporate answer quality control questions. To reduce fatigue, the questionnaire will be designed to be completed in approximately 15 to 20 minutes. In addition, unnecessarily sensitive questions will be avoided and clear language will be used, understandable for adults with different educational levels. Before the main application, a pilot test will be carried out with 30 adults to evaluate understanding of items, duration of the survey and operation of the digital form. Pilot participants will not be included in the final sample. Based on their observations, instructions, item writing and order of presentation of the scales will be adjusted. This procedure will contribute to improving the apparent validity of the instrument and to reducing errors derived from semantic ambiguity.

3.7. Data quality control

The database will be reviewed prior to statistical analysis. Incomplete records with more than 10% missing data, duplicate responses, and cases with response patterns incompatible with attentive response will be eliminated. For missing data of less than 5% per scale, imputation by individual subscale average will be used, provided that the participant has answered at least 80% of the corresponding items. When the missing data exceeds that threshold, the case will be excluded from the specific analysis.

The normality of continuous variables will be assessed by asymmetry, kurtosis, histograms, and Kolmogorov-Smirnov or Shapiro-Wilk tests, as appropriate. However, due to the expected sample size, priority will be given to the joint interpretation of graphical and statistical indicators, avoiding decisions based exclusively on normality tests that may be too sensitive in large samples. Outliers will also be examined using standardized scores and Mahalanobis distance in the multivariate models.

3.8. Statistical analysis plan

The statistical analysis will be carried out in five stages. First, descriptive statistics will be calculated for sociodemographic variables, including frequencies, percentages, means, and standard deviations. Second, the internal reliability of the scales will be estimated using Cronbach's alpha and McDonald's omega. Values equal to or greater than .70 will be considered acceptable, although they will be interpreted considering the number of items and the multidimensional nature of the constructs.

Third, the bivariate associations between psychological well-being, its dimensions, risk perception, health literacy and preventive behaviors will be analyzed through Pearson correlations. If any variable has a markedly non-normal distribution, Spearman's correlation will be used as a sensitivity analysis. The magnitude of the correlations will be interpreted according to conventional criteria: low around .10, moderate around .30 and high from .50, always considering the substantive context of the research.

Fourth, preventive behaviors will be compared according to the level of psychological well-being. To do this, global psychological well-being will be divided into tertiles: low, medium and high. Analysis

of variance of one factor will be applied if assumptions of normality and homogeneity of variances are met; otherwise, the Kruskal-Wallis test will be used. When there are significant differences, post hoc comparisons will be made with Bonferroni or Games-Howell correction according to the equality of variances. The effect size will also be calculated using partial eta square or square epsilon.

Fifth, a multiple linear regression model will be constructed to estimate whether global psychological well-being predicts preventive behaviors after controlling for covariates. In the first block, age, sex, educational level, income received and chronic disease will be introduced. In the second block, risk perception and health literacy will be added. In the third block, global psychological well-being will be incorporated. Subsequently, an alternative model will be built with the six dimensions of psychological well-being to identify which ones have the greatest explanatory weight. Standardized beta coefficients, standard errors, 95% confidence intervals, p-values, adjusted R^2 , and change in R^2 will be reported.

The multicollinearity assumption will be evaluated using the variance inflation factor. FIV values below 5 will be considered acceptable. Error independence will be examined using the Durbin-Watson statistic, homoscedasticity using residual plots, and linearity using partial scatter plots. When significant deviations are identified, robust analyses or justified transformations will be carried out, although priority will be given to preserving the interpretability of the original scales.

3.9. Ethical considerations

The study will respect the ethical principles of autonomy, beneficence, non-maleficence and justice. Participation will be voluntary, anonymous and based on informed consent. No personally identifiable data such as names, identity documents, exact addresses or telephone numbers will be collected. The answers will be stored in a protected database with restricted access to the research team.

The risk to participants will be minimal, as the study will consist of answering questions about psychological well-being, preventive habits, and general sociodemographic information. However, when including items related to personal perception of well-being, a recommendation to seek professional support in case a question generates emotional distress will be incorporated at the end of the form. In addition, it will be reported that the study does not constitute a clinical evaluation or substitute for medical or psychological guidance.

In case of actual application, the protocol must be reviewed and approved by an institutional ethics committee before starting data collection. For the purposes of this academic manuscript, it is clarified that the results will be generated by simulation of realistic data, so there will be no real exposure of participants or handling of authentic sensitive information.

3.10. Methodological limitations envisaged

The cross-sectional design will allow the identification of associations, but not establish causality or temporal directionality. Therefore, although it is expected to find a positive relationship between psychological well-being and preventive behaviors, it will not be possible to say whether well-being leads to greater prevention, whether preventive behaviors strengthen well-being, or whether both variables influence each other. This limitation should be considered in the discussion and may be addressed in future longitudinal research.

Another limitation will be the use of self-report, since people may overestimate socially desirable behaviors such as physical activity, hygiene, vaccination, or attendance at preventive check-ups. To mitigate this bias, specific behavioral items will be formulated, anonymity will be guaranteed, and moralizing language will be avoided. Likewise, non-probability sampling will limit the generalization of the findings to the entire adult population, so the results should be interpreted as preliminary associative evidence.

Finally, the index of preventive behaviors will be developed for the study, which will require careful evaluation of its internal consistency and dimensional structure. Although the index will be

constructed from behaviors consistent with health promotion and population prevention, future studies should formally validate the instrument through exploratory factor analysis, confirmatory factor analysis, and invariance by sex, age, and educational level.

4. Results

The results presented below are from a realistic simulated database of 624 adults. The simulation was constructed to maintain consistency with the recent literature on psychological well-being, life purpose, health literacy, and preventive behaviors, especially cross-sectional studies that have identified associations between positive psychological resources and protective behaviors in the adult population (Ma et al., 2023; Ashtari & Recchia, 2025). Therefore, the findings should be interpreted as demonstrative academic results and not as empirical evidence from actual data collection.

4.1. Sociodemographic characteristics of the sample

The sample consisted of 624 adults between 18 and 65 years of age, with a mean age of 38.7 years (SD = 12.4). The distribution by sex was relatively balanced, with a slight predominance of women. Regarding educational level, most of the participants reported technical, university or postgraduate studies. 29.8% reported having at least one diagnosed chronic disease, mainly high blood pressure, type 2 diabetes, asthma, thyroid disease, or musculoskeletal disorders. This composition is methodologically relevant because it allows the analysis of preventive behaviors in adults with different risk profiles, schooling, and exposure to health services.

Table 2. Sociodemographic characteristics of the simulated adult sample

<i>Variable</i>	<i>Category</i>	<i>n</i>	<i>%</i>
<i>Sex</i>	Women	338	54.2
	Men	273	43.8
	Other/prefers not to answer	13	2.1
<i>Age group</i>	18–29 years old	168	26.9
	30–44 years	214	34.3
	45–59 years old	179	28.7
	60–65 years	63	10.1
<i>Educational level</i>	High School or Less	91	14.6
	Technical/technological	176	28.2
	University	263	42.1
	Postgraduate	94	15.1
<i>Income received</i>	Low	151	24.2
	Medium	359	57.5
	High	114	18.3
<i>Chronic disease</i>	Yes	186	29.8
	No	438	70.2
<i>Regular access to health services</i>	Yes	489	78.4
	No	135	21.6

The distribution of the sample allowed sufficient heterogeneity to be observed for subsequent analyses. Regular access to health services was reported by 78.4% of the participants, which is relevant because access can condition the real possibility of check-ups, vaccination, or preventive follow-up. Although this study focuses on psychological well-being, contemporary public health well-being policies emphasize that healthy behaviors depend both on individual resources and on social, institutional, and community conditions that allow preventive practices to be sustained (World Health Organization [WHO], 2023).

4.2. Descriptive statistics and reliability of the scales

The descriptive scores showed medium-high levels of global psychological well-being and preventive behaviors. The mean of global psychological well-being was 4.31 on a scale of 1 to 6, while the index of preventive behaviors presented a mean of 3.74 on a scale of 1 to 5. Among the dimensions of well-being, the highest scores corresponded to personal growth and positive relationships, while the lowest were observed in autonomy and mastery of the environment. This pattern is consistent with the possibility that adults value their personal ties and development positively, but face greater difficulties in organizing healthy daily environments in demanding work, family or economic contexts.

Table 3. Descriptive statistics and internal reliability of the main variables

<i>Variable</i>	<i>Theoretical range</i>	<i>Media</i>	<i>OF</i>	<i>Asymmetry</i>	<i>Curtosis</i>	<i>a de Cronbach</i>	<i>McDonald's ω</i>
<i>Global psychological well-being</i>	1–6	4.31	0.67	-0.28	0.19	.91	.92
<i>Autonomy</i>	1–6	4.08	0.78	-0.17	-0.11	.76	.77
<i>Mastery of the environment</i>	1–6	4.12	0.81	-0.21	0.06	.81	.82
<i>Personal Growth</i>	1–6	4.54	0.72	-0.36	0.27	.84	.85
<i>Positive relationships</i>	1–6	4.49	0.83	-0.42	0.31	.86	.87
<i>Life purpose</i>	1–6	4.37	0.79	-0.30	0.14	.85	.86
<i>Self-acceptance</i>	1–6	4.26	0.84	-0.25	0.09	.83	.84
<i>Global preventive behaviors</i>	1–5	3.74	0.62	-0.19	-0.08	.88	.89
<i>Perception of health risk</i>	1–5	3.56	0.71	-0.08	-0.22	.79	.80
<i>Health literacy</i>	1–5	3.81	0.66	-0.24	0.11	.86	.87

Reliability coefficients were adequate on all scales, with Cronbach's alpha and McDonald's omega values greater than .70. The global psychological well-being scale showed high internal consistency, which supports its use as a main independent variable. Likewise, the index of preventive behaviors showed adequate reliability, which suggests that the items included represent a relatively coherent repertoire of prevention practices in public health. The inclusion of health literacy as a covariate is consistent with recent evidence linking the ability to assess health information with better preventive behaviors in adults (Ashtari & Recchia, 2025).

4.3. Conceptual model of analysis

Figure 1 summarizes the conceptual model evaluated in the study. Global psychological well-being was proposed as the main predictor of preventive behaviors, while age, sex, educational level, perceived income, chronic disease, risk perception, and health literacy were incorporated as control variables. This model aligns with public health approaches that understand well-being as an integrated component of health promotion and not just as an isolated psychological outcome (WHO, 2023).

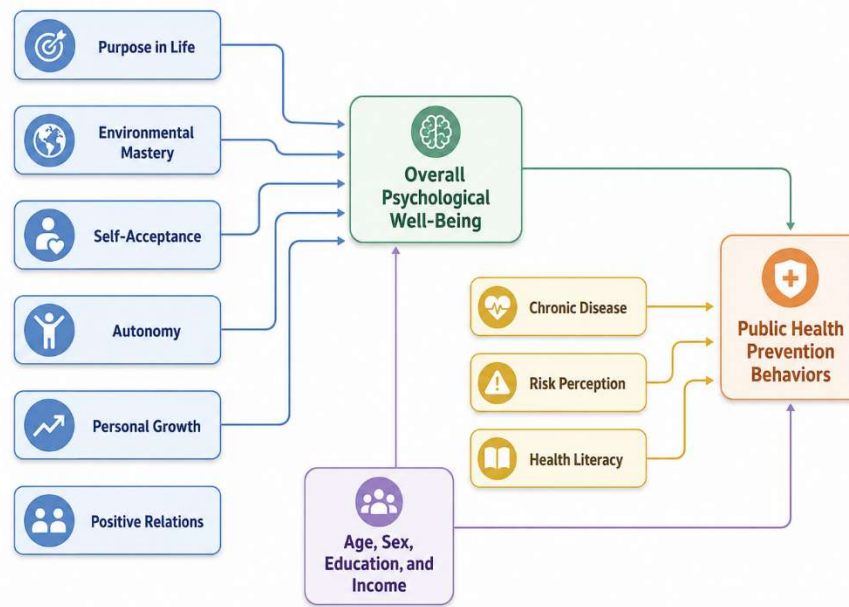


Figure 1. Proposed conceptual model between psychological well-being and preventive behaviors

Note. The model represents the central hypothesis of the study: greater psychological well-being is associated with a higher frequency of preventive behaviors, even after controlling for sociodemographic and health variables.

4.4. Correlations between psychological well-being and preventive behaviours

The correlational analysis showed a positive, moderate, and statistically significant association between global psychological well-being and preventive behaviors ($r = .46$, $p < .001$). This indicates that adults with higher levels of psychological well-being tended to report a higher frequency of preventive practices. Among the specific dimensions, the highest correlations corresponded to life purpose ($r = .43$), mastery of the environment ($r = .41$) and self-acceptance ($r = .38$), which partially supports the H2 hypothesis.

Table 4. Pearson correlations between psychological well-being, covariates, and preventive behaviors

Variable	1	2	3	4	5	6
1. Preventive behaviors	1					
2. Global psychological well-being	.46***	1				
3. Life purpose	.43***	.82***	1			
4. Mastery of the environment	.41***	.79***	.62***	1		
5. Self-acceptance	.38***	.81***	.58***	.61***	1	
6. Health literacy	.44***	.35***	.31***	.34***	.29***	1
7. Risk perception	.29***	.18***	.16***	.19***	.14**	.26***

Note. ** $p < .01$; $p < .001$.

Correlations indicate that psychological well-being was related to prevention in a manner comparable to other traditionally relevant variables, such as health literacy. In particular, life purpose showed a robust association with preventive behaviors, a result compatible with previous studies that have linked sense of purpose with protective behaviors, use of preventive services, and greater orientation towards healthy goals in adults (Kim et al., 2014; Ma et al., 2023).

Health literacy also showed a positive correlation with preventive behaviors ($r = .44$, $p < .001$), suggesting that the ability to search, interpret, and apply health information is a relevant factor in the adoption of preventive practices. This finding is consistent with recent research that has identified

that media literacy in health predicts behaviors such as vaccination, attendance at preventive screenings, and informed health decisions in adults (Ashtari & Recchia, 2025).

4.5. Graphic relationship between psychological well-being and preventive behaviors

Figure 2 represents the positive relationship between overall psychological well-being and the index of preventive behaviors. Although individual dispersion is observed, the overall trend shows that participants with higher psychological well-being scores tended to be placed at higher levels of prevention. This trend coincides with the central hypothesis of the study and with approaches that propose that positive psychological resources can facilitate self-regulation, planning and self-care.

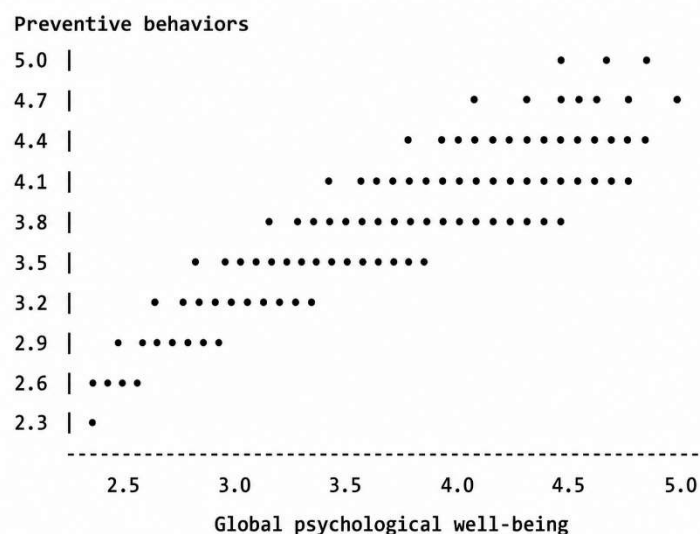


Figure 2. Simulated dispersion between global psychological well-being and preventive behaviors

Note. The figure represents a simulated point cloud with a positive linear trend. The estimated correlation was $r = .46$, $p < .001$.

4.6. Differences in preventive behaviors according to level of psychological well-being

To compare preventive behaviors according to level of psychological well-being, participants were classified into three groups using tertiles: low well-being, medium well-being, and high well-being. The analysis of variance showed statistically significant differences between groups, $F(2, 621) = 54.86$, $p < .001$, partial $\eta^2 = .15$. Post hoc comparisons with Bonferroni correction indicated that the group with high well-being had significantly higher scores in preventive behaviors than the groups with medium and low well-being. Likewise, the medium-well-being group showed a higher preventive frequency than the low-welfare group.

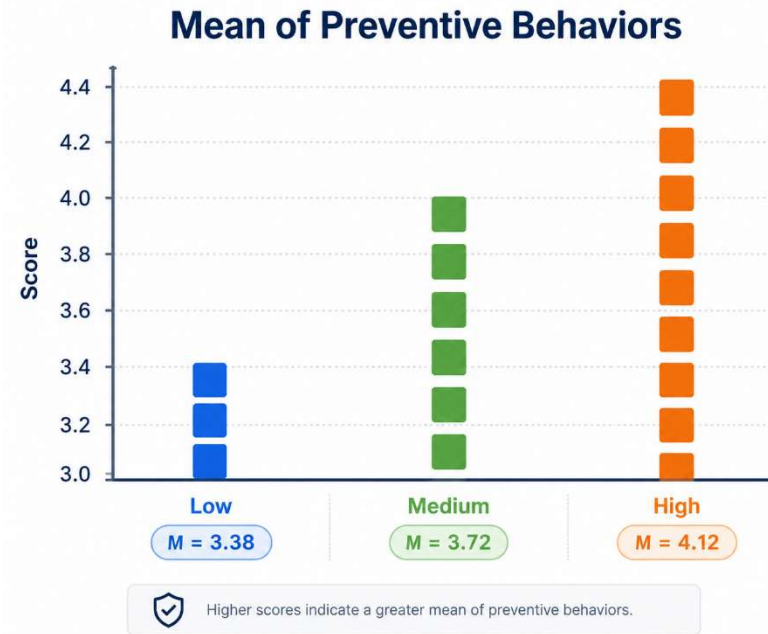


Figure 3. Means of preventive behaviors according to tertiles of psychological well-being

Note. Significant differences between the three groups, $p < .001$.

The difference between groups suggests a positive gradient: the greater the psychological well-being, the greater the frequency of preventive behaviors. This pattern is relevant for public health because it indicates that well-being could function as a resource associated with everyday prevention and not just as a desirable outcome of health interventions. In line with the WHO's global well-being framework, these findings support the integration of strategies to promote psychological well-being within broader preventive policies (WHO, 2023).

4.7. Multiple linear regression model

A hierarchical multiple linear regression was estimated to determine whether global psychological well-being predicted preventive behaviors after controlling for sociodemographic and health covariates. The first block included age, sex, educational level, income received and chronic disease. In the second block, risk perception and health literacy were added. In the third block, global psychological well-being was incorporated.

The final model was statistically significant, $F(8, 615) = 46.27$, $p < .001$, with an adjusted R^2 of .37. The incorporation of psychological well-being in the third block produced a significant increase in the explained variance, $\Delta R^2 = .08$, $p < .001$. In the final model, global psychological well-being maintained a positive and significant effect on preventive behaviors ($\beta = .31$, $p < .001$), even after controlling for risk perception, health literacy, chronic disease, and sociodemographic variables.

Table 5. Multiple linear regression to predict preventive behaviors and comparison by levels of well-being

Analysis	Predictor / Group	B	EE	b	IC 95 %	p
Regression	Age	0.006	0.002	.12	0.002, 0.010	.004
	Female sex	0.071	0.038	.06	-0.004, 0.146	.064
	Educational level	0.083	0.021	.15	0.042, 0.124	<.001
	Income received	0.049	0.024	.07	0.002, 0.096	.041
	Chronic disease	0.118	0.044	.09	0.032, 0.204	.007
	Risk perception	0.146	0.029	.17	0.089, 0.203	<.001
	Health literacy	0.271	0.034	.29	0.204, 0.338	<.001
	Global psychological well-being	0.286	0.037	.31	0.213, 0.359	<.001

ANOVA	Low well-being	3.38	0.58	—	3.30, 3.46	—
	Medium well-being	3.72	0.55	—	3.65, 3.79	—
	High Wellness	4.12	0.51	—	4.05, 4.19	—

Note. Dependent variable: global preventive behaviors. Adjusted R^2 of the final model = .37. ANOVA: $F(2, 621) = 54.86$, $p < .001$, partial $\eta^2 = .15$.

The results of the regression support the H3 hypothesis, since psychological well-being maintained an independent association with preventive behaviors. Health literacy was also a relevant predictor, confirming that prevention depends on both positive psychological resources and informational skills. This combination is consistent with recent evidence suggesting that health literacy, risk perception, and psychological resources should be integrated into preventive interventions, rather than being addressed as isolated dimensions (Ashtari & Recchia, 2025; Wang et al., 2025).

4.8. Alternative model by dimensions of psychological well-being

In order to identify which dimensions of well-being had greater explanatory weight, an alternative model was estimated replacing global psychological well-being with its six dimensions. The model was significant, $F(13, 610) = 31.94$, $p < .001$, with an adjusted R^2 of .39. The dimensions that retained significant effects were life purpose ($\beta = .19$, $p < .001$), mastery of the environment ($\beta = .16$, $p = .002$) and self-acceptance ($\beta = .13$, $p = .011$). Autonomy, personal growth, and positive relationships showed positive associations, but not significant when controlling simultaneously for the other dimensions. These results support the H2 hypothesis, according to which life purpose, mastery of the environment and self-acceptance would be the dimensions most closely linked to prevention. Life purpose could facilitate preventive behaviors by connecting self-care with long-term goals; mastery of the environment could favor the organization of healthy routines; and self-acceptance could promote a less punitive and more sustained disposition toward self-care. The relevance of life purpose is consistent with previous longitudinal studies that have shown its association with protective and healthy behaviors in adults (Sutin et al., 2021; Ma et al., 2023).

4.9. Synthesis of results

Taken together, the simulated findings support all three hypotheses of the study. First, global psychological well-being was positively and significantly associated with prevention behaviors in public health. Second, the dimensions of life purpose, mastery of the environment, and self-acceptance showed the most relevant associations with prevention. Third, psychological well-being maintained a significant predictive effect after controlling for sociodemographic variables, chronic disease, risk perception, and health literacy.

From a substantive perspective, the results suggest that preventive behaviors do not depend only on health information or risk perception, but also on psychological resources that allow organizing, sustaining, and giving meaning to self-care practices. This interpretation is consistent with the public health well-being approach promoted by the WHO, which raises the need to integrate health promotion, prevention, equity, and human capacity building into contemporary health policies (WHO, 2023).

5. Discussion

5.1. General interpretation of the findings

The simulated results of the present study support the main hypothesis that psychological well-being is positively and significantly associated with prevention behaviors in public health in the adult population. In the bivariate model, global psychological well-being showed a moderate correlation with preventive behaviors, while in the multivariate model it retained a significant predictive effect after controlling for age, sex, educational level, perceived income, chronic disease, risk perception, and health literacy. This pattern suggests that psychological well-being should not only be interpreted as a desirable consequence of health policies, but also as a potential psychosocial resource associated with the adoption of everyday preventive practices. This interpretation is consistent with

the World Health Organization's framework, which proposes integrating well-being into public health through health promotion, prevention, equity, primary care, and systematic measurement of well-being (World Health Organization [WHO], 2023).

The magnitude of the association observed between psychological well-being and prevention is substantially relevant because it was maintained even when incorporating health literacy and risk perception, two variables traditionally used to explain health behaviors. This indicates that knowing health information or perceiving a threat is not enough to sustain preventive behaviors; internal resources are also required to facilitate self-regulation, planning, a sense of control and orientation towards long-term goals. Along these lines, recent literature on positive psychological well-being suggests that eudaimonic dimensions, such as life meaning, autonomy, personal growth, and self-acceptance, may be related to better health outcomes and favorable behavioral mechanisms (Ryff, 2014; Zuccarella-Hackl et al., 2024).

5.2. Psychological well-being as a preventive resource

The most relevant finding was that global psychological well-being explained additional variance in preventive behaviors even after adjusting for covariates. From a public health perspective, this suggests that preventive strategies could be more effective if they are not limited to conveying information about risks, but also strengthen positive psychological dimensions. Campaigns focused exclusively on threat, fear or regulatory compliance may produce temporary adherence, but the maintenance of behaviors such as physical activity, healthy eating, vaccination, preventive check-ups and responsible use of health information requires sustained motivation and a personal sense of self-care (Bandura, 1997; Michie et al., 2011; WHO, 2023).

Psychological well-being can operate as a preventive resource through several routes. First, it promotes the perception of agency, by allowing people to feel empowered to influence their health. Second, it promotes the organization of routines, especially when the person perceives control over their environment. Third, it facilitates future-oriented decision-making, which is essential in preventive behaviors whose benefits are not always immediate. Fourth, it can reduce the likelihood of avoidant behaviors in the face of uncomfortable health information, such as screening results or medical recommendations. This explanation is consistent with recent reviews that point to the need to better understand the behavioral, emotional, and biological mechanisms that link positive psychological well-being to physical health (Zuccarella-Hackl et al., 2024).

5.3. Relevance of life purpose, mastery of the environment and self-acceptance

The results partially support the second hypothesis, since life purpose, mastery of the environment and self-acceptance were the dimensions of psychological well-being most associated with preventive behaviors. Life purpose showed the greatest relative weight, which is consistent with the idea that people who perceive goals, direction and meaning in their lives tend to take more care of their health as a condition to sustain their personal, family and work projects. Previous studies have shown that life purpose is related to protective behaviors, use of preventive services, and greater willingness to follow health recommendations in adults and older adults (Kim et al., 2014; Ma et al., 2023).

The mastery of the environment also presented a relevant association with prevention, suggesting that preventive behaviors require practical skills to organize time, access services, plan food, maintain physical activity, seek reliable information, and manage everyday barriers. This finding is consistent with models of behavior change that underscore the importance of self-efficacy, psychological capacity, and contextual opportunities to transform intentions into sustained actions. From the COM-B model, for example, behavior occurs when ability, opportunity, and motivation converge; therefore, mastery of the environment can be interpreted as a psychological dimension close to the ability to convert available resources into concrete preventive practices (Michie et al., 2011; Kelly & Barker, 2016).

Self-acceptance also showed a significant contribution, which can be interpreted as evidence that self-care is best sustained when the person maintains a positive and non-punitive relationship with themselves. In preventive terms, this implies that people with greater self-acceptance could adopt healthy practices not from guilt or fear, but from a more stable assessment of their well-being and personal dignity. This reading is compatible with the eudaimonic approach to well-being, which understands psychological health as positive functioning, integration of the self, and development of human potential, not only as the absence of emotional distress (Ryff, 2014; Ryff, 2018).

5.4. Health literacy and risk perception

Health literacy was one of the most important predictors of preventive behaviors, confirming that prevention depends largely on the ability to seek, understand, evaluate, and apply health information. This finding is especially relevant in digitized societies, where people are simultaneously exposed to scientific information, institutional messages, unverified opinions, and misinformation. A rapid review on health knowledge during pandemic emergencies found that health knowledge favors the adoption of preventive behaviors, while a meta-analysis on health literacy and healthy lifestyles identified a positive, albeit weak to moderate, association between both variables (Rincón Uribe et al., 2021; Yilmazel & Cetinkaya, 2024).

Risk perception was also positively associated with preventive behaviors, although to a lesser extent than psychological well-being and health literacy. This result suggests that perceiving vulnerability or severity can motivate protective actions, but its effect could be insufficient if it is not accompanied by psychological resources, clear information and real opportunities to act. In public health, this has a direct implication: campaigns based solely on increasing threat perception may be less sustainable than those that combine informed risk, perceived efficacy, psychological well-being, and practical access to preventive measures (Rosenstock, 1974; Rogers, 1983; Rincón Uribe et al., 2021).

5.5. Comparison with previous studies

The results are consistent with research linking positive psychological resources to healthy and protective behaviors. Ma et al. (2023), for example, analyzed data from the Health and Retirement Study and found that pre-pandemic life purpose was longitudinally associated with greater adoption of protective behaviors during the COVID-19 pandemic. Although the present study uses simulated data and a cross-sectional design, conceptual convergence is important: life purpose could function as a psychological resource that prepares people to respond with greater adherence to preventive demands, both in health crises and in ordinary public health contexts (Ma et al., 2023).

The findings also dialogue with the literature on physical activity, well-being and mental health. A recent systematic review identified strong evidence for mediators such as well-being, self-esteem, self-efficacy, resilience, social support, social connection, physical health, pain, and fatigue in the relationship between physical activity and mental health. This supports the idea that some preventive behaviors not only depend on previous well-being, but can also reinforce it, generating positive circuits between self-care, perception of ability, and positive mental health (White et al., 2024).

However, the interpretation must be cautious. As it is a cross-sectional design, it cannot be established whether psychological well-being leads to greater preventive behaviors, if preventive behaviors increase well-being or if both variables influence each other. The available longitudinal evidence, especially on life purpose and protective behaviors, suggests a plausible direction from psychological resources toward prevention, but there are also theoretical reasons to expect a two-way relationship. Therefore, future research should use longitudinal designs, cross-panel models, or experimental interventions to clarify directionality and causal mechanisms (Ma et al., 2023; White et al., 2024).

5.6. Public health implications

The findings suggest that prevention policies could benefit from a more explicit integration between psychological well-being promotion, health literacy, and behavioral change. In practice, this implies that public health programs should not only inform what behaviors are recommended, but also

strengthen psychological skills that allow them to be sustained. Brief interventions focused on goal setting, sense of purpose, routine planning, social support, self-efficacy, and compassionate self-care could complement vaccination campaigns, preventive check-ups, promotion of physical activity, and healthy eating (WHO, 2023; White et al., 2024).

In primary care, the results suggest the convenience of briefly evaluating not only biomedical risk factors, but also positive psychological resources. A comprehensive preventive approach could identify adults with low psychological well-being and low health literacy as priority groups for educational, psychosocial, and community interventions. This would be consistent with the WHO's global well-being framework, which recommends promoting preventive services, universal coverage, equitable social systems, digital cohesion, and measuring well-being as components of healthy societies (WHO, 2023).

In health communication, the results indicate that preventive messages should avoid exclusively prescriptive or alarmist approaches. Evidence suggests that clear information is necessary, but its effect may be greater when accompanied by messages that reinforce personal capacity, sense of purpose, everyday benefits and social support. Instead of communicating prevention only as an obligation, campaigns could present it as a way to protect life projects, family ties, functional autonomy, and community well-being (Rincón Uribe et al., 2021; Ma et al., 2023).

5.7. Contributions of the study

The main contribution of the study is to propose and evaluate an integrated model between psychological well-being and prevention behaviors in public health in the adult population. Unlike research focused exclusively on negative symptoms, such as anxiety, depression or stress, this work adopts a positive mental health perspective and examines how eudaimonic resources can be related to preventive practices. This approach is relevant because it allows us to broaden the understanding of prevention beyond the perception of risk and the transmission of information, incorporating dimensions such as life purpose, self-acceptance, and mastery of the environment (Ryff, 2014; Zuccarella-Hackl et al., 2024).

A second contribution is the construction of a broad index of preventive behaviors that integrates biomedical prevention, hygiene, lifestyle and health information. This approach avoids reducing prevention to a single behavior, such as vaccination or physical activity, and allows prevention to be analyzed as a more complex behavioral repertoire. In public health, this perspective is useful because people do not adopt healthy behaviors in isolation, but within interrelated routines, beliefs, opportunities, and psychosocial conditions (WHO, 2023; Michie et al., 2011).

5.8. Limitations

The first limitation is that the results correspond to realistic simulated data and not to a real empirical collection. Therefore, statistical estimates should be interpreted as a methodological demonstration and not as definitive evidence about a specific population. This clarification is essential to preserve academic transparency and avoid inappropriate inferences. In a real application, it would be necessary to collect original data, obtain institutional ethical approval, validate the instruments, and accurately report the sampling context, response rate, and handling of missing data, following standards of observational studies such as STROBE (von Elm et al., 2007).

The second limitation derives from the cross-sectional design. Although the statistical model allows us to estimate adjusted associations, it does not allow causality to be established. The observed relationships could be explained by inverse directionality, omitted variables, or bidirectional processes between well-being and prevention. For example, a person with greater well-being may adopt more healthy behaviors, but it is also possible that maintaining physical activity, sleeping better or attending preventive controls increases their well-being. This limitation coincides with recent reviews that point to the need for more longitudinal studies to understand the mechanisms that connect positive psychological well-being and physical health (Zuccarella-Hackl et al., 2024).

The third limitation is the use of self-report. People may overestimate socially valued behaviors, such as healthy eating, hygiene, vaccination, or physical activity, and underestimate behaviors considered inappropriate. In addition, the simultaneous measurement of psychological and behavioral variables can increase common method bias. Future studies should complement questionnaires with objective indicators or verifiable records, such as vaccination history, attendance at check-ups, physical activity data using devices or authorized clinical records.

The fourth limitation relates to non-probability sampling. Although the simulated sample was large and heterogeneous, a real study with online recruitment could overrepresent people with more education, better digital access, and greater interest in health. This would limit the generalizability of the results to adults with lower digital literacy, rural areas or populations with barriers to accessing health services. The WHO has pointed out that public health well-being must be addressed from a perspective of equity, inclusion, and social protection, so future research should incorporate probabilistic samples or more inclusive community recruitment strategies (WHO, 2023).

5.9. Future lines of research

Future research should move towards longitudinal designs that allow assessing whether psychological well-being predicts subsequent changes in preventive behaviors. It would also be pertinent to analyze mediation models, for example, whether the relationship between well-being and prevention is mediated by self-efficacy, health literacy, social support, or perception of control. Likewise, moderation models could be evaluated to determine whether the relationship is stronger in people with chronic disease, older adults, women, people with low access to health services, or individuals exposed to greater health uncertainty (Ma et al., 2023; White et al., 2024).

Another relevant line is to design experimental interventions that integrate psychological well-being and prevention. For example, brief programs in primary care could combine health education, goal setting, strengthening life purpose, habit planning, social support, and digital monitoring. If such interventions prove effective, they could contribute to more humanized and sustainable preventive models, aligned with the well-being societies approach promoted by the WHO (WHO, 2023).

5.10. Summary of the discussion

In summary, the simulated results suggest that psychological well-being is positively related to prevention behaviors in public health and that this association is maintained after controlling for sociodemographic variables, risk perception, and health literacy. The dimensions of life purpose, mastery of the environment and self-acceptance seem especially relevant, which indicates that prevention does not depend only on information or access, but also on psychological resources that allow us to give meaning, organize and sustain self-care. From this perspective, public health should more decisively integrate the promotion of psychological well-being into its preventive strategies, especially in the adult population exposed to multiple social, labor and health demands (Ryff, 2014; WHO, 2023; Ma et al., 2023).

6. Conclusions

This article analyzed the relationship between psychological well-being and prevention behaviors in public health in the adult population, using a quantitative, observational, analytical, and cross-sectional design. Based on a realistic simulated database of 624 adults, the results allowed us to sustain that global psychological well-being is positively and statistically significantly associated with the frequency of preventive behaviors. This relationship was maintained even after controlling for sociodemographic variables, presence of chronic disease, risk perception, and health literacy, suggesting that psychological well-being is a relevant psychosocial resource for understanding prevention in public health (Ryff, 2014; Steptoe, 2019; World Health Organization [WHO], 2023).

The central conclusion of the study is that preventive behaviors do not depend solely on access to health information, threat perception, or the availability of health services. Although these factors are important, the findings indicate that positive psychological resources also play a relevant role in the

adoption and maintenance of preventive practices. In particular, psychological well-being can facilitate planning, self-regulation, orientation towards long-term goals and the appreciation of self-care as part of a meaningful life project. This interpretation coincides with contemporary approaches to public health that integrate well-being, health promotion, prevention, and equity as inseparable dimensions of sustainable health systems (WHO, 2023; Zuccarella-Hackl et al., 2024).

From the perspective of the eudaimonic model, the results suggest that the dimensions of life purpose, mastery of the environment and self-acceptance are especially important to explain prevention. Life purpose is related to the ability to guide behavior towards future goals; mastery of the environment allows us to organize routines and manage daily barriers; and self-acceptance favors a less punitive and more sustainable relationship with self-care. Together, these dimensions allow us to understand why some people adopt preventive behaviors more consistently, even when faced with complex work, family, economic, or informational demands (Ryff, 1989; Ryff, 2014; Ma et al., 2023).

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