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Attitudes Towards Seeking Psychological Help: An Integrative Model Based on Contact, Essentialist Beliefs About Mental Illness, and Stigma

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Abstract
Based on intergroup contact theory, a proposed comprehensive model of attitudes towards seeking professional psychological help was tested, including both potential barriers to mental health help-seeking (i.e., public stigma and self-stigma of seeking help, prejudicial and essentialist beliefs about mental illness, intergroup anxiety) and potential facilitators (i.e., direct and extended contact with persons with mental illness). Relevant measures were completed by 119 community-dwelling participants. Path analysis showed that direct (but not extended) contact with mental illness, by reducing intergroup anxiety, led to less negative beliefs about mental illness and weaker essentialist beliefs about mental illness (the latter being directly and positively associated with negative beliefs about mental illness). Moreover, less negative beliefs about mental illness, by reducing perceptions of self (but not public) stigma of seeking psychological help, were related to more positive attitudes towards help-seeking. Results are discussed in the context of the (unintentional) adverse effects of biogenetic (essentialist) explanations of mental disorders, and the clinical implications regarding interventions that aim at improving help-seeking attitudes.

Keywords Intergroup contact · Stigma · Beliefs about mental illness · Essentialism · Attitudes towards psychological help-seeking

Introduction

In Europe, it is estimated that every year 38.2% of the population suffers from a mental disorder (Wittchen et al., 2011), but only 25.7% of these people report consultations with professional health care services, and even fewer receive mental health care through psychological treatment (Wittchen & Jacobi, 2005). The prevalence of seeking help from a professional in the last year because of psychological problems has been estimated to be 17–18% in European countries such as France, Spain, Sweden, the Netherlands, and Belgium (European Commission, 2010). In the United States, among the 44.7 million adults, in 2016, with any mental illness (AMI) in the past year, meeting DSM-IV criteria while excluding developmental and substance use disorders, only 19.2 million received mental health services in the past year (e.g., used prescription medication, or used outpatient or inpatient services; Park-Lee, Lipari, Hedden, Kroutil, & Porter, 2017). About 1 in 5 American adults with past year AMI (20.7%) perceived an unmet need for mental health care in the past year, while among those with a perceived unmet need and past year AMI, 42.5% did not receive any mental health services in the past year. In a Canadian study, an estimated 21% of the population aged 15 or older reported having a partially met need for mental health care in the past year, while for another 12%, the needs were unmet (Sunderland & Findlay, 2013). Many researchers agree that a majority of people meeting the criteria for mental disorders underutilize mental health services (e.g., Corrigan, Druss, & Perlick, 2014). Lack of treatment typically results in poorer clinical, psychosocial, and socioeconomic outcomes. Regarding Greece, the percentage of untreated mental health cases is relatively high. According to a Eurobarometer report (European Commission, 2010), Greece was among the European countries that exhibited very low proportion of people (7%) who sought help from a professional for a psychological or emotional problem in the past 12 months, when the corresponding mean proportion of European Union citizens was more than double (15%) the percentage recorded for

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Greece. Given that research on the issue of help-seeking for mental health problems is limited in Greece (Economou et al., 2016), the present study intends to contribute to this important, albeit under-investigated, area.

The importance of identifying barriers to seeking mental health care has generally been acknowledged in the literature (e.g., Mojtabai et al., 2011). Apart from the structural barriers to help-seeking (e.g., financial constraints, lack of insurance coverage, lack of availability of mental health services, difficult access to services), there are attitudinal factors related to reduced seeking of mental health care. These latter factors have been found to be much more important than structural barriers to both initiating and continuing mental health treatment, at least for cases with mild or moderate mental health problems (Andrade et al., 2014). Among the most studied of these factors are the stigma associated with mental illness, and—to a lesser extent—prejudice against the mentally ill. Regarding facilitators to seeking mental health care, in addition to social support, symptom severity, and wish for change, previous research has suggested that contact with people with mental illness can decrease prejudice, which, in turn, may be related to reduced stigma, and positive attitudes towards help-seeking for mental health problems (Hewstone, 2015; Mendoza, Masuda, & Swartout, 2015). However, few studies have sought to examine both barriers and facilitators to mental health help-seeking simultaneously (e.g., Coleman, Stevelink, Hatch, Denny, & Greenberg, 2017; Gulliver, Griffiths, & Christensen, 2010; Hom, Stanley, & Joiner, 2015), although this information can then be used to develop and implement targeted interventions to overcome barriers and promote facilitators. Thus, the purpose of the present research was to test an integrative process model of attitudes towards seeking professional psychological help—which are a precursor of willingness of help-seeking (Vogel, Wade, & Hackler, 2007), and actual help-seeking (Mojtabai, Evans-Lacko, Schomerus, & Thornicroft, 2016; Schnyder, Panczak, Groth, & Schultze-Lutter, 2017; Ten Have et al., 2010; Woodward & Pachana, 2009)—including both potential barriers to mental health help-seeking, such as public- and self-stigma, negative beliefs about mental illness, and essentialist beliefs about mental disorders, as well as potential facilitators, namely direct and extended intergroup contact.

Potential Barriers to Mental Health Help-Seeking

Public (Social) Stigma and Self-Stigma

In a comprehensive review of relevant research, Corrigan (2004) identified two types of stigma associated with mental illness that impede seeking mental health care: public stigma and self-stigma. Public stigma comprises negative stereotypical beliefs (e.g., notions of dangerousness), prejudicial affective responses (e.g., fear), and discriminatory behaviors (e.g., avoidance) that the "public" (i.e., other people) may exhibit toward the group of individuals with mental illness. Self-stigma involves self-prejudice (e.g., diminished self-esteem, low sense of self-worth, shame, poor self-efficacy), self-discrimination (e.g., self-imposed isolation), and negative stereotypical beliefs (e.g., notions of incompetence) of members of the stigmatized group (i.e., persons with mental illness) about themselves, when they have internalized stigmatizing attitudes and beliefs held by the public. Public stigma and self-stigma are separate but related concepts (Corrigan, 2004; Corrigan & Watson, 2002; Pattyn, Verhaeghe, Sercu, & Bracke, 2014; Vogel, Wade, et al., 2007). Vogel and Wade (2009) proposed that, apart from the stigma associated with mental illness, the stigma associated with seeking professional psychological help, implying weakness and failure on the part of members of the stigmatized group, also inhibits help-seeking. Tucker et al. (2013) emphasized the conceptual distinction between the self-stigma associated with having a mental illness and the self-stigma associated with seeking psychological help. These authors argued that, "in addition to being perceived as mentally ill, being perceived as a help-seeker is an additional threat to one's self-concept, is internalized separately from mental illness stigma, and is a stronger predictor of help-seeking attitudes" (p. 528). In this regard, the public stigma associated with seeking psychological help may be linked to perceptions that people who seek help are undesirable or socially unacceptable, leading to stereotyping, prejudice, and discrimination of those people. Internalization of the negative societal images of what it means to be mentally ill or to seek psychological services may lead to feelings of inferiority and inadequacy, loss of self-esteem, and an individual's internalized devaluation and disempowerment (i.e., self-stigma; Vogel, Bitman, Hammer, & Wade, 2013). As a consequence, it is not surprising that individuals hide their psychological concerns and avoid seeking help, to limit the adverse effects associated with being negatively labeled and stigmatized. Lannin, Vogel, Brenner, and Tucker (2015) proposed the "internalized stigma model" to help understand the mechanisms by which the public stigma and self-stigma of mental illness, as well as the public stigma and self-stigma of seeking psychological help can be linked to help-seeking intentions, by considering mediated effects.

Public stigma associated with seeking psychological help has been shown to negatively predict help-seeking attitudes (Komiya, Good, & Sherrod, 2000; Rojas-Vilches, Negy, & Reig-Ferrer, 2011). Moreover, self-stigma associated with seeking psychological help is positively related to public stigma and negatively related to both attitudes towards and intentions of seeking psychological help. Additionally, only self-stigma remains a significant predictor of negative attitudes towards seeking professional help, when both

self-stigma and public stigma are entered into a predictive model (Jennings et al., 2015; Ludwikowski, Vogel, & Armstrong, 2009; Vogel, Shechtman, & Wade, 2010; Vogel, Wade, & Haake, 2006; Wade et al., 2015). Vogel, Wade, et al. (2007) verified that the relationship between public stigma and attitudes towards help-seeking was fully mediated by self-stigma. Thus, we hypothesized that the effects of public stigma associated with seeking psychological help on help-seeking attitudes would be mediated by self-stigma (Hypothesis 1).

Negative Beliefs About Mental Illness and Prejudice

Negative beliefs about mental illness, which essentially represent stereotypes about mental illness (e.g., that it is inherent, incurable and shameful), the mentally ill (e.g., that they are dangerous and personally and socially incompetent) and their treatment (e.g., that they should be detained in hospital for treatment) are part of the stigmatizing process, along with prejudice and discriminatory behavior (Corrigan, 2004). Negative beliefs about mental illness (which, conceived as stereotypes, constitute the cognitive component of prejudice; Stroebe & Insko, 1989) have been shown to be directly associated with negative attitudes towards seeking psychological help (Rojas-Vilches et al., 2011), preference for no treatment (Hirai & Clum, 2000) and desire for social distance (a measure of prejudice) from people with mental illness (e.g., Anagnostopoulos & Hantzi, 2011). We proposed that negative beliefs about mental illness would feed into public and self-stigma, by strengthening perceptions of social and personal inferiority and inadequacy of those seeking psychological help, which in turn could shape negative help-seeking attitudes. Thus, we hypothesized that the effects of negative beliefs about mental illness on help-seeking attitudes would be mediated by self-stigma associated with seeking psychological help (Hypothesis 2), since we assumed that the effects of public stigma on help-seeking attitudes would be mediated by self-stigma.

Essentialist Beliefs About Mental Disorders, Prejudice, and Stereotype Endorsement

Psychological essentialism is defined as a particular way of representing entities in cognition, as if people have an immutable underlying essence which can be used to predict unobserved similarities between members of a certain group/social category, such as the mentally ill. Essentialism involves beliefs of discreteness, uniformity, naturalness, and historical invariance, offering inductive potential about category membership (Haslam, Bastian, Bain, & Kashima, 2006; Haslam & Ernst, 2002). Essentialist beliefs positively covary with stigmatizing attitudes towards people with mental disorders (Howell, Weikum, & Dyck, 2011). Bastian and Haslam (2006) found that essentialist beliefs significantly predicted stereotype endorsement for nine social categories associated with gender, sexual preference, ethnicity, and occupation. Thus, we hypothesized that essentialist beliefs about mental illness would lead to endorsement of negative, stereotypic, beliefs about mental illness (Hypothesis 3).

Potential Facilitators of Mental Health Help-Seeking

Intergroup Contact and Prejudice Reduction

Historically, one of the most influential approaches in the study of intergroup relations has been Allport's (1954) "contact hypothesis," which proposes that contact between members of two different groups can produce positive outcomes (reduced prejudice, increased acceptance) if certain "optimal" conditions are met, namely, if the contact situation involves group members of equal status, striving for the attainment of common goals, through interdependent/cooperative efforts, enjoying institutional support. In recent years, through new advances in theorizing and research, the "contact hypothesis" has developed into intergroup contact theory (Brown & Hewstone, 2005; Hewstone & Swart, 2011). In a massive meta-analysis of 515 relevant studies, Pettigrew and Tropp (2006) confirmed that contact reduces prejudice even when optimal contact conditions are not strictly met. The positive influence of contact on prejudice reduction is effected (i.e., mediated) through weakening negative affect (specifically intergroup anxiety; Stephan & Stephan, 1985) and strengthening positive affect (e.g., empathy; Pettigrew & Tropp, 2008). In conditions, however, where direct contact with members of an outgroup is limited or not feasible, indirect or "extended" contact (i.e., knowing somebody—preferably a friend—who has a friend belonging to the stigmatized outgroup) has proved to be quite effective in reducing prejudice towards this outgroup, mainly by reducing intergroup anxiety (Turner, Hewstone, & Voci, 2007).

Contact with people suffering from mental illness (sometimes referred to as "familiarity" with mental illness) has been shown to be associated with reduced prejudice towards the mentally ill, signifying reduced desire for social distance (Boyd, Katz, Link, & Phelan, 2010), and less negative attitudes towards the mentally ill (Corrigan, Edwards, Green, Diwan, & Penn, 2001). It should be noted, however, that Anagnostopoulos and Hantzi (2011) reported that the relationship between familiarity with mental illness and desire for social distance was (partially) mediated by certain aspects of opinions (beliefs) about mental illness, such as social stigmatization. Moreover, contact with mental illness (i.e., knowing someone is being treated for mental illness and having undergone treatment oneself) is a significant (positive) predictor of intentions to seek psychiatric help for depression (Schomerus, Matschinger, & Angermeyer, 2009).

Apart from the well-established relationship between contact and prejudice reduction, there is limited evidence that contact reduces essentialist beliefs (about ethnic categories in children; Deeb, Segall, Birnbaum, Ben-Eliyahu, & Diesendruck, 2011) and indirect evidence for the possible mediating role of essentialist beliefs in the relationship between contact and prejudice against mental illness (Haqanee, Lou, & Lalonde, 2014). Thus, we hypothesized that direct and indirect or extended contact with mental illness (i.e., having fiends with mental illness, and having friends or relatives who have friends with mental illness, respectively), by reducing negative affect towards the mentally ill (i.e., intergroup anxiety), would lead to less prejudiced beliefs about mental illness (Hypothesis 4); additionally, contact could lead to the reduction of essentialist beliefs about mental illness (Hypothesis 5).

The Proposed Integrative Model of Attitudes Towards Seeking Psychological Help

Given that there is no single, unifying, theory or model of help-seeking behavior for mental health problems, a diverse array of frameworks has been used to guide relevant research. For example, the health belief model (O'Connor, Martin, Weeks, & Ong, 2014; Rosenstock, Strecher, & Becker, 1988), the theory of planned behavior (Ajzen, 1991; Mak & Davis, 2014), the common-sense model of illness self-regulation (for a review, see Baines & Wittkowski, 2013; Leventhal, Leventhal, & Cameron, 2001), and the Andersen behavioral model of health service use (Andersen, 1995; Roh et al., 2017) have been applied to study help-seeking attitudes, intentions, or behaviors for mental health problems. In view of the rather fragmented picture provided by the literature on the factors related to help-seeking behaviors, as well as on the barriers to and facilitators of attitudes towards seeking professional psychological help, the present research was designed to test the above mentioned five hypotheses, not in isolation, but in the context of an integrative model (Fig. 1).

Adopting the perspective of intergroup contact theory and on the basis of research evidence for the effects of contact on reducing prejudice against mental illness, we propose that direct and extended contact with mental illness will lead to less negative beliefs about mental illness, via reducing intergroup anxiety; additionally, direct contact will lead to weaker endorsement of negative beliefs about mental illness, through the reduction of essentialist beliefs about mental illness. In turn, less negative beliefs about mental illness, by reducing perceptions of self and public stigma associated with seeking psychological help, will lead to more positive attitudes towards help-seeking; however, the effects of public stigma on help-seeking attitudes will be mediated by self-stigma.

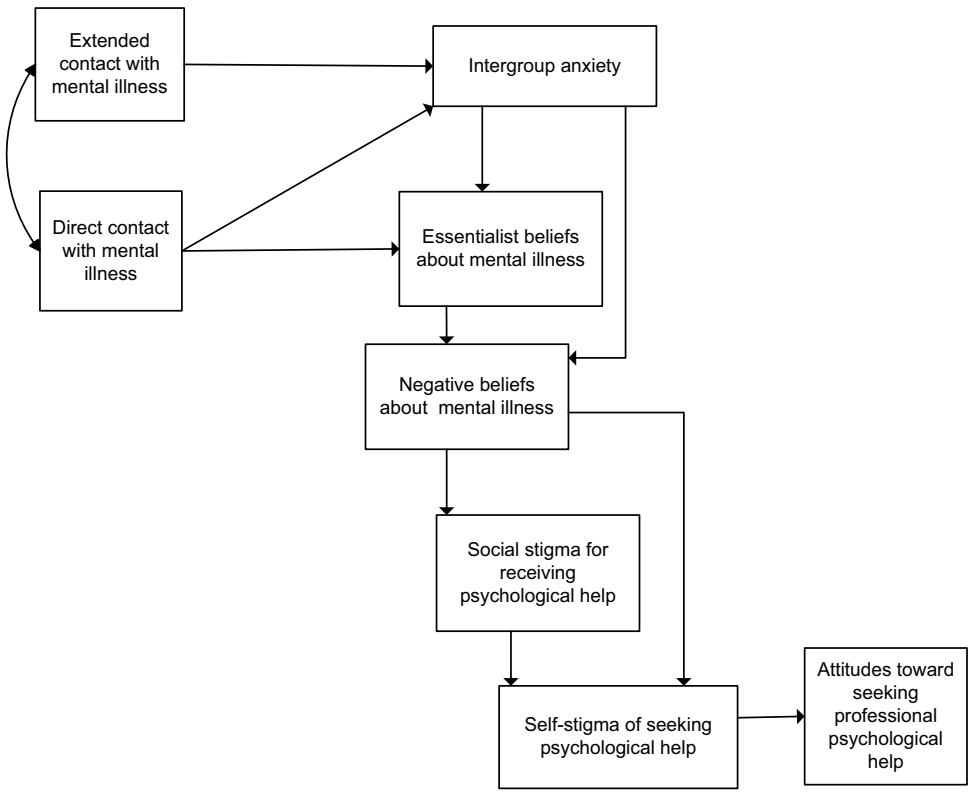

Fig. 1 Proposed integrative model of attitudes toward seeking professional psychological help, used in the present study

Method

Participants and Procedures

One hundred and nineteen community-dwelling Greek adults (46 men, 38.7%, and 73 women, 61.3%) aged between 20 and 50 years old ($M = 35.5$; $SD = 8.77$) were recruited using a combination of random and snowball sampling techniques. More specifically, the researcher responsible for data collection personally contacted a random sample of adults living in the Athens area, comprising approximately 33% of the final sample. Subsequently, these participants were asked to suggest five people they knew in their community and social network who might be willing to contribute to the study. Then, the researcher randomly selected two of those people, personally contacted them and handed the questionnaire to those willing to participate. This latter strategy is formally known as exponential snowball sampling. The response rate was 77.8%.

Potential participants were eligible if they met the following criteria: 18 years of age or older, community-dwelling, sufficient reading and writing skills to complete the questionnaires, able to provide informed consent. Exclusion criteria for participation in the study were as follows: having a medical history of severe or profound hearing or visual impairment, which might interfere with completion of assessments; a history of neurological conditions, such as dementia, that could cause severe decline in memory, reasoning, or thinking skills; current or past history of enduring serious mental illness, such as a psychotic disorder, causing severe dysfunction and having an impact at least on perception and cognition such as hallucinations, delusions, or formal thought disorder; chronic use of antipsychotic medication. This information was obtained from participants by self-report and clinical picture. Participants were assured of the anonymity of their written answers to the questions presented in the relevant questionnaires. Written informed consent was obtained from all study participants prior to inclusion in the study.

Measures

For each of the scales described below—unless otherwise indicated—participants were asked to complete it in-person and express their agreement or disagreement with each statement, using a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). Where necessary, items were reverse-scored. The following scales were included in the packet of measures and were presented to study participants in a random sequence, to account for and minimize any potential order effects.

Attitudes Toward Seeking Professional Psychological Help (ATSPPH)

Fischer and Farina's (1995) 10-item short scale was used to measure attitudes toward seeking professional psychological help ($\alpha = .873$), with higher scores indicating more positive attitudes (e.g., "I would want to get psychological help if I were worried or upset for a long period of time," "The idea of talking about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts"—reverse coded).

Self-Stigma of Seeking Help (SSOSH)

This 10-item scale developed by Vogel et al. (2006) was used to assess perceptions of personal stigma related to seeking psychological help ($\alpha = .838$), with higher scores indicating stronger perceptions of self-stigma (e.g., "I would feel inadequate if I went to a therapist for psychological help," "I would feel okay about myself if I made the choice to seek professional help"—reverse coded).

Stigma Scale for Receiving Psychological Help (SSRPH)

A 5-item scale developed by Komiya et al. (2000) was used to assess perceptions of public stigma associated to seeking psychological help ($\alpha = .779$), with higher scores indicating stronger perceptions of public stigma (e.g., "Seeing a psychologist for emotional or interpersonal problems carries social stigma," "It is advisable for a person to hide from people that he/she has seen a psychologist").

Negative Beliefs Toward Mental Illness (BMI)

In order to assess negative beliefs about mental illness, we used Hirai and Clum's (2000) 21-item scale. The scale comprises items tapping beliefs about the dangerousness (e.g., "A mentally ill person is more likely to harm others than a normal person") and poor interpersonal and social skills of the mentally ill (e.g., "It might be difficult for mentally-ill people to follow social rules such as being punctual or keeping promises"), as well as the incurability of mental disorders (e.g., "Individuals diagnosed as mentally ill will suffer from symptoms throughout their life"). On the basis of the present data, we opted for a unidimensional scale of negative beliefs about mental illness, based on eigenvalues obtained from exploratory factor analysis, where the first factor, with eigenvalue equal to 6.28, accounted for most of the variance, while the eigenvalue corresponding to the second factor was quite lower (equal to 1.91), signifying that a model with one factor might be adequate to represent the

data (α = .875). All items appeared to have large loadings on the same factor. Thus, a total, composite, score was calculated for this scale, by summing scores on individual items of the dangerousness, incurability, and poor social and interpersonal skills subscales, as suggested by previous research (e.g., Saint Arnault, Gang, & Woo, 2018; Segal, Coolidge, Mincic, & O'Riley, 2005).

Essentialist Beliefs About Mental Disorders

Essentialist beliefs about mental disorders were measured using 8 items adapted from the essentialist beliefs scale, developed by Haslam and Ernst (2002). Five items assessed *immutability* ("Mental disorders are disorders that could be readily and completely cured"—reverse coded), *naturalness* ("Mental disorders are a category that is natural, rather than just being an artificial product of people's efforts to classify mental disorders"), *discreteness* ("Mental disorders are a category that has clear and sharp boundaries, so that people either have a mental disorder or they do not"), *necessary features* ("People with a mental disorder have certain necessary features, without which they would not be people with this mental disorder"), and *historical invariance* ("Mental disorders are disorders that have existed through human history with few changes"). These five items composed the *natural kinds* dimension of essentialist beliefs about mental disorders. Three additional items assessed *inherence* ("Mental disorders are disorders that have an underlying reality, so that beneath the surface, i.e., their symptoms, people with a specific mental disorder are inherently the same"), *uniformity* ("Mental disorders are relatively uniform disorders, so that having a specific mental disorder are very similar to one another") and *informativeness* ("Mental disorders are informative disorders, so that knowing someone has a mental disorder tells us a lot about the person"). These three items composed the *entitativity* dimension of essentialist beliefs about mental disorders. Parallel analysis (Hayton, Allen, & Scarpello, 2004) on the present data suggested a unidimensional scale of essentialist beliefs about mental disorders (α = .736). Factor analysis verified that all items had large loadings on the same factor. Thus, a total, composite, score was created, by averaging participants' scores across all items of the natural kinds and entitativity subscales, as suggested by previous studies (e.g., Haslam, Bastian, & Bissett, 2004).

Intergroup Anxiety

For the assessment of intergroup anxiety, participants were asked how they feel (or would feel) when they meet (or if they met) a person with a mental disorder (Turner et al., 2007). They responded on eight 7-point semantic differential items (e.g., comfortable—tense, nervous—relaxed, suspicious—trustful), coded so that higher scores reflected more anxiety. Internal consistency reliability for this scale was satisfactory (α = .890).

Direct Contact

Cross-group friendship (i.e., having friends with mental illness) was used as a measure of direct contact (Turner et al., 2007), assessed by two items (with Cronbach's α = .878; Spearman-Brown reliability coefficient = .904): "Have you got any friends who have a mental illness?" (none = 1, one = 2, two to five = 3, five to ten = 4, more than ten = 5), "How often do you see those friends of yours who have a mental illness?" (never = 1, rarely = 2, once in a while = 3, often = 4, very often = 5). Higher scores indicated greater experience of direct contact.

Extended Contact

Two items (with Cronbach's α = .797; Spearman-Brown reliability coefficient = .803) were used to measure levels of extended (or indirect) contact (Turner et al., 2007): "Have you got any friends who have friends with mental illness?" "Have you got relatives who have friends with mental illness?" (none = 1, one = 2, two to five = 3, six to ten = 4, more than ten = 5). Higher scores indicated greater heightened experience of extended contact.

All measures used in the present research were adopted from English and translated into Greek, following forward–backward translation procedures and guidelines for the use of instruments in cross-cultural research (Brislin, 1970).

Statistical Analyses

All analyses were conducted with Mplus version 6.12 statistical software package (Muthen & Muthen, 2010), using the full information maximum likelihood (FIML) estimation method for handling missing data. Although the proportion of cases with missing data was small (4.3%), we employed the FIML method to obtain parameter estimates by maximizing the likelihood function of the incomplete data. This method minimizes bias in parameter estimates and standard errors, and maximizes the statistical power of the study and its statistical analyses, under the assumptions of multivariate normality, and missing at random (MAR) data, where the probability of missingness depends on observed data but not on missing data (Dong & Peng, 2013; Enders, 2010; Schafer & Graham, 2002). Subsequently, we tested a theory-based path model with observed variables. Path analysis enables researchers to estimate the strength of the relationships between variables as they are arrayed in the model and are placed into a "causal hierarchy." It also enables researchers to decompose relations among variables into direct or

indirect/mediator, and spurious components (representing all unmeasured causes of the predictors), so that the significant pathways involved in predicting an outcome can be identified. Direct and extended contact with mental illness were entered as predictors, while intergroup anxiety, essentialist beliefs about mental illness, negative beliefs about mental illness, self-stigma of seeking and social stigma for receiving psychological help were entered as mediators. The measure of attitudes toward seeking professional psychological help was entered as the criterion variable. Variables hypothesized to be explained by others (e.g., self-stigma of seeking psychological help) were endogenous variables, while those not being predicted by others (e.g., direct contact with mental illness) were exogenous variables.

Parameter estimates were derived applying the maximum likelihood method. Multivariate outliers were checked by examining Mahalanobis distances. In the case of mediation, bootstrapping has been recommended (MacKinnon, Lockwood, & Williams, 2004) because the sampling distribution of the mediated (indirect) effect may not be normal (Shrout & Bolger, 2002). Bootstrapping, a non-parametric method based on resampling with replacement, was conducted, generating 5000 bootstrap samples, and the bias-corrected bootstrap confidence intervals (CI) for indirect, direct, and total effects, were estimated. The direct, total, and specific indirect effects were tested separately, given that a significant indirect effect might be detected even when the direct or total effect was not statistically significant (Rucker, Preacher, Tormala, & Petty, 2011). Four indices were used to assess goodness of fit of the model: the root-mean-square error of approximation (RMSEA) accompanied by its associated 90% confidence interval, the standardized root mean square residual (SRMR), the comparative fit index (CFI), and the Tucker–Lewis Index (TLI). Model fit was considered adequate when CFI and TLI were greater than .95, SRMR was lower than .08, and RMSEA was lower than .06 (Hu & Bentler, 1999). Improvements to model fit were indicated by a decrease in the model Akaike information criterion (AIC), the model Bayesian information criterion (BIC), and the sample-size adjusted BIC (SABIC). Regarding evaluation of sample size sufficiency and statistical power adequacy (i.e., the probability of correctly rejecting a null hypothesis, when it really is false), we used the *Mplus* Monte Carlo simulation (Thoemmes, MacKinnon, & Reiser, 2010). Data were generated from a population with hypothesized parameter values (i.e., path coefficients for direct effects included in our final model), while the number of samples to be drawn (replications) and to be fitted to the postulated model was set at 10,000 to ensure that stability had been reached. Power was estimated for each parameter based on the proportion of replications for which the null hypothesis that a parameter is equal to zero, was rejected at the 5% level. The cut-off value for an adequate statistical power was set, by convention, at .80.

Results

Descriptive Statistics and Correlations Among Study Variables

Table 1 illustrates descriptive statistics and the correlations between main psychological variables. Attitudes toward help-seeking were significantly and negatively related to self-stigma of help-seeking, social stigma for receiving help, and negative beliefs about mental illness. Self-stigma of help-seeking was significantly and positively associated with social stigma for receiving help, and negative beliefs about mental illness. Negative beliefs about mental illness were significantly and positively associated with essentialist beliefs about mental illness and intergroup anxiety, while they were negatively related to direct and extended contact with mental illness. Essentialist beliefs

Table 1 Means, standard deviations, and correlations between predictor, mediator, and criterion variables

Variable	*M*	*SD*	1	2	3	4	5	6	7
1. Attitudes towards help-seeking	4.68	1.12							
2. Self-stigma of help-seeking	2.72	1.02	−.546***						
3. Social-stigma for receiving help	3.14	1.27	−.260**	.371***					
4. Negative beliefs about mental illness	3.55	0.84	−.269**	.394***	.193*				
5. Essentialist beliefs about mental illness	3.42	0.84	−.114	.112	−.063	.396***			
6. Intergroup anxiety	3.51	1.10	−.160	.200*	.027	.658***	.329***		
7. Direct contact	2.07	1.12	.159	−.125	−.047	−.358***	−.125	−.458***	
8. Extended contact	1.94	0.91	.207*	−.077	−.089	−.250**	−.143	−.246**	.607***

$N = 119$

*$p < .05$, **$p < .01$, ***$p < .001$

about mental illness were positively related to intergroup anxiety, which, in turn, was negatively associated with direct and extended contact with mental illness.

Path Analysis

Given that path models assume the multivariate normal distribution, we assessed joint multivariate kurtosis and checked for cases that were outliers. The multivariate kurtosis value was small (equal to − .242) and was considered negligible and non-significant at the .05 level, based on the critical ratio criterion (equal to − .134 < 1.96). Two cases with the highest Mahalanobis distance values, signifying outliers farthest from the centroid of the data set, were deleted. In the model-building process, we proceeded through the following three steps. In the first step, we respecified our model to make it saturated, in order to add the paths that our model had specified to have zero regression coefficients. In this way, we ensured that no significant path between variables passed unnoticed. Thus, all paths among the exogenous/predictor variables (i.e., direct and extended contact), the mediators (e.g., essentialist beliefs about mental illness), and the criterion/outcome variable (i.e., attitudes toward seeking professional psychological help) were included in the model and were estimated. Covariances between the exogenous variables were included in the model. Bootstrapping was conducted generating 5000 usable bootstrap samples and 95% bias-corrected CIs for direct, indirect, and total effects. The saturated or just-identified model (i.e., the model with zero degrees of freedom) had a perfect fit to the data (e.g., TLI = 1.000, CFI = 1.000, RMSEA = .000, SRMR = 0.000). Degree of parsimony model fit indices for this model included AIC = 2436.920, BIC = 2558.455, and SABIC = 2419.367. However, the key to path analysis was finding an acceptable and parsimonious approximation to the saturated model, with fewer parameters to be estimated. Given that various paths appeared to correspond to non-significant relationships, in the second step we retained the significant paths from the previous step and tested the paths that were specified to be present in our proposed model (Fig. 1). This model had a satisfactory fit to the data, with χ^2 (17) = 15.307, p = .573, TLI = 1.019, CFI = 1.000, RMSEA = .000 (90% CI [.000, .076]), SRMR = .053. Degree of parsimony model fit indices for this model included AIC = 2418.227, BIC = 2492.806, and SABIC = 2407.456. In the third step, we included the paths that were specified to be zero but were significant from step one, and dropped the paths that were specified but were not significant in step two. On the basis of overall fit indices that could take into account both model fit and model complexity–parsimony, this new, trimmed, model (Fig. 2) had lower AIC, BIC, and SABIC values (equal to 1431.836, 1476.031, and 1425.454, respectively), indicating

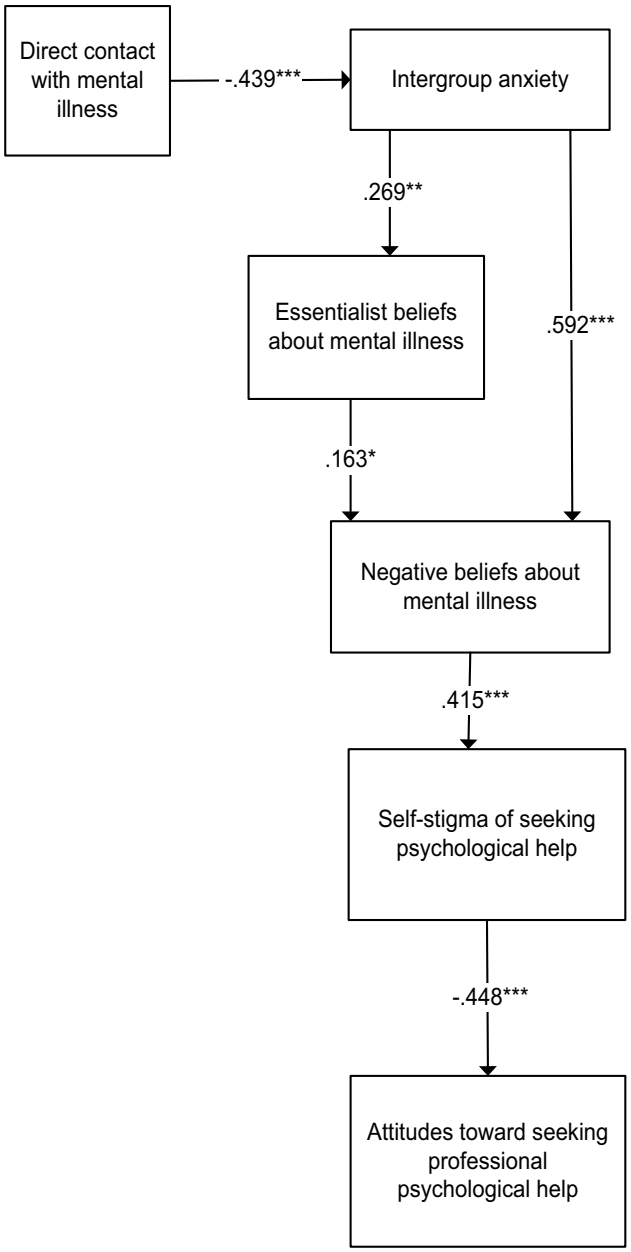

Fig. 2 Final model: standardized direct path coefficients obtained from path analysis with observed variables. *p < .05, **p < .01, ***p < .001

a better fit to the data than both the saturated and the proposed models. Adequate goodness-of-fit indices were also obtained for this model: CFI = 1.000, RMSEA = .000 (90% CI [.000, .067]), TLI = 1.044, SRMR = .043. The Chi-square test of model fit was equal to χ^2 (9) = 5.370, p = .801, suggesting that the current model had no significant worsening of fit, compared to the saturated (perfectly fitting) model. The variables included in path analysis accounted for a large proportion of variance in negative beliefs about mental illness (42.9%), and for a lesser proportion of variance

in attitudes toward seeking professional psychological help (20.0%), intergroup anxiety (19.3%), self-stigma of seeking psychological help (17.2%), and essentialist beliefs about mental illness (7.3%). Regarding statistical power to detect each direct effect appearing in the final model, achieved power was adequate (≥ .80) for almost all path coefficients. Only the power to detect the path from essentialist beliefs to negative beliefs was relatively low (equal to .617). This direct effect would be adequately powered if the sample size would increase to 185.

Direct Effects in Path Analysis

As shown in Fig. 2, one of the two exogenous/predictor variables (namely, extended contact with mental illness) and one of the potential mediators (namely, public stigma, i.e., social stigma for receiving psychological help) of the proposed model (Fig. 1) do not appear in the final model. The paths between these two variables and the other variables appeared to correspond to non-significant relationships. Four of the standardized regression coefficients pertaining to direct effects among study variables achieved statistical and practical significance (the latter meaning that beta weights were above .30 in absolute value, signifying at least a medium effect size; Cohen, 1988), while two other path coefficients were significant but of relatively lower magnitude. In particular, direct contact with mental illness was significantly related to lower intergroup anxiety ($\beta = -.439$, $p < .001$), which was in turn significantly related to weaker essentialist beliefs ($\beta = .269$, $p < .01$) and weaker negative beliefs about mental illness ($\beta = .592$, $p < .001$). Essentialist beliefs about mental illness were positively related to negative beliefs about mental illness ($\beta = .163$, $p < .05$). Moreover, negative beliefs about mental illness had a positive and statistically significant direct path to self-stigma of seeking psychological help ($\beta = .415$, $p < .001$). Finally, due to the absence of public stigma from the final model, our first hypothesis (i.e., that the effects of public stigma on help-seeking attitudes would be mediated by self-stigma) was not fully supported; however, there was a strong direct negative relationship between self-stigma of seeking psychological help and attitudes toward seeking professional psychological help ($\beta = -.448$, $p < .001$), indicating that self-stigma could directly lead to less favorable attitudes towards help-seeking (Table 2).

Total Effects in Mediation Analysis

Regarding noteworthy significant standardized total effects, intergroup anxiety was positively related to negative beliefs about mental illness. As far as the comparison of the strengths of direct and indirect effects is concerned, the difference between the direct effect from intergroup anxiety to negative beliefs about mental illness, and the specific mediation effect from intergroup anxiety through essentialist beliefs to negative beliefs about mental illness, was examined. The 95% confidence interval for this unstandardized difference was between .286 and .535. This interval did not contain zero, suggesting that the direct effect was significantly larger than the corresponding specific mediation effect.

Indirect Effects in Mediation Analysis

As shown in Table 3 regarding significant two-path and three-path standardized specific indirect effects, direct contact with mental illness was significantly related to weaker negative beliefs about mental illness and less strong essentialist beliefs about mental illness, through reduced intergroup anxiety. The first of these findings provided support

Table 2 Standardized parameter estimates and their 95% confidence intervals for direct and total effects, obtained from path analysis ($n = 117$)

Independent variable		Dependent variable	Parameter estimate (*SE*)	95% CI *LL, UL*
Direct effects				
CONT	→	ANX	−.439*** (.070)	[−.577, −.302]
ANX	→	BELIEF	.592*** (.060)	[.474, .711]
ANX	→	ESSEN	.269** (.095)	[.084, .455]
ESSEN	→	BELIEF	.163* (.076)	[.013, .312]
BELIEF	→	STIGMA	.415*** (.081)	[.256, .574]
STIGMA	→	ATTIT	−.448*** (.080)	[−.605, −.290]
Total effects				
ANX	→	BELIEF	.636*** (.052)	[.533, .739]

SE standard error, *CI* confidence interval, *LL* lower limit, *UL* upper limit, *ANX* intergroup anxiety, *CONT* direct contact with mental illness, *ESSEN* essentialist beliefs about mental illness, *BELIEF* negative beliefs about mental illness, *STIGMA* self-stigma of seeking psychological help, *ATTIT* attitudes toward seeking professional psychological help

*$p < .05$, **$p < .01$, ***$p < .001$

Table 3 Standardized parameter estimates and 95% bootstrapped confidence intervals for indirect effects

Specific indirect effects								
Independent variable		Mediator				Dependent variable	Parameter estimate (*SE*)	95% CI *LL, UL*
CONT	→	ANX	→			BELIEF	−.260*** (.054)	[−.366, −.154]
CONT	→	ANX	→			ESSEN	−.118** (.045)	[−.207, −.030]
ANX	→	ESSEN	→			BELIEF	.044 (.027)	[−.009, .096]
ANX	→	BELIEF	→			STIGMA	.246*** (.054)	[.139, .352]
ESSEN	→	BELIEF	→			STIGMA	.067 (.037)	[−.004, .139]
BELIEF	→	STIGMA	→			ATTIT	−.186*** (.054)	[−.292, −.080]
Independent variable		Mediator 1		Mediator 2		Dependent variable		
ANX	→	BELIEF	→	STIGMA	→	ATTIT	−.110*** (.033)	[−.175, −.045]
CONT	→	ANX	→	ESSEN	→	BELIEF	−.019 (.012)	[−.043, .005]
CONT	→	ANX	→	BELIEF	→	STIGMA	−.108*** (.032)	[−.170, −.046]
ANX	→	ESSEN	→	BELIEF	→	STIGMA	.018 (.013)	[−.007, .043]
Total indirect effects								
CONT			→			BELIEF	−.279*** (.055)	[−.388, −.171]
CONT			→			STIGMA	−.116*** (.034)	[−.183, −.049]
CONT			→			ATTIT	.052** (.019)	[.015, .089]
ANX			→			STIGMA	.264*** (.058)	[.150, .378]
ANX			→			ATTIT	−.118*** (.036)	[−.189, −.047]
ESSEN			→			ATTIT	−.030 (.019)	[−.066, .006]

SE standard error, *CI* confidence interval, *LL* lower limit, *UL* upper limit, *ANX* intergroup anxiety, *CONT* direct contact with mental illness, *ESSEN* essentialist beliefs about mental illness, *BELIEF* negative beliefs about mental illness, *STIGMA* self-stigma of seeking psychological help, *ATTIT* attitudes toward seeking professional psychological help

**$p < .01$, ***$p < .001$

to our fourth hypothesis stating that the relationship between direct contact with mental illness and negative beliefs about mental illness would be mediated by intergroup anxiety. The second of these findings indicated that our fifth hypothesis regarding the direct effect of contact on reducing essentialist beliefs was not fully supported, since contact could lead to the reduction of essentialist beliefs, not directly but indirectly, through reducing intergroup anxiety. Intergroup anxiety was positively related to self-stigma through negative beliefs about mental illness. Furthermore, negative beliefs about mental illness were negatively associated with attitudes toward seeking professional psychological help via self-stigma, a finding which is in line with our second hypothesis concerning the mediating role of self-stigma in the relationship between beliefs about mental illness and help-seeking attitudes. In addition, intergroup anxiety was associated with less favorable attitudes toward seeking professional psychological help through negative beliefs about mental illness and self-stigma, while direct contact with mental illness was related to less self-stigma, through intergroup anxiety and essentialist beliefs about mental illness. Most importantly, a significant four-path standardized indirect effect also emerged: direct contact with mental illness was related to more positive attitudes toward seeking professional psychological help through intergroup anxiety, negative beliefs about mental illness, and self-stigma ($\beta = .048$, $SE = .017$, $p < .01$, 95% CI [.014, .082]). This finding underpins, justifies, and captures the essence of our integrated proposed model adopting an intergroup contact theory perspective, indicating that direct contact with mental illness, by reducing intergroup anxiety, may be related to less negative beliefs about mental illness, which in turn can reduce perceptions of self-stigma, leading to more positive attitudes towards help-seeking. Summing up, as shown by the noteworthy total indirect (mediated) effects, although direct contact does not have direct effects on negative beliefs about mental illness, self-stigma, and attitudes towards help-seeking, it does have significant indirect effects on all three variables.

Discussion

The most important barrier to actual utilization of mental health services by the majority of those in need is attitudes towards seeking psychological help, which seem to become increasingly less positive over time in western societies (Mackenzie, Erickson, Deane, & Wright, 2014). The main aim of the present research was to examine a comprehensive model of attitudes towards seeking professional psychological help, integrating the most researched barriers and facilitators of help-seeking attitudes, focusing on the relevant attitudes of those without a history of serious mental illness, which may potentially affect their intentions and actual help-seeking behavior, if they experience mild or moderate psychological problems and are in need of psychological help. The proposed model was built on the basis of five hypotheses drawing on relevant theoretical and research evidence.

The findings of the present study fully supported three of our five hypotheses and partially supported the other two. More specifically, our first hypothesis, that the effects of public stigma on help-seeking attitudes would be mediated by self-stigma, was not entirely supported, since public stigma was absent from the final path model; instead, we found that self-stigma could directly lead to less favorable attitudes towards help-seeking. This finding, in line with Vogel et al.'s (2006) results, indicates that, while public stigma is significantly but moderately correlated with negative attitudes towards help-seeking, when self-stigma is taken into account, only self-stigma has a significant direct effect on negative attitudes towards help-seeking. This means that self-stigma, conceptualized as internalized public stigma, is more proximal to attitudes to seeking professional psychological help (Vogel et al., 2013). Our second hypothesis, namely that the effects of negative beliefs about mental illness on help-seeking attitudes would be mediated by self-stigma, was fully supported; this means that negative beliefs about mental illness—reflecting stereotypes about the inherence, incurability and shamefulness of mental illness, the dangerousness and incompetence of the mentally ill and the necessity of their restriction—as the cognitive part of the stigmatizing process, shape perceptions of the self-stigma associated with seeking psychological help, leading to less favorable attitudes towards help-seeking. The present results also lend full support to our third hypothesis, showing that there is a direct link between essentialist beliefs about mental illness and negative stereotypic beliefs about mental illness, a finding adding to the existing evidence that essentialist thinking about social categories is predictive of stereotype endorsement (Bastian & Haslam, 2006; Howell et al., 2011).

Turning to our hypotheses about direct and extended contact effects, it should be noted that direct and extended contact were highly correlated, but only direct contact had a significant direct effect on intergroup anxiety, although relevant research has shown independent direct effects of both types of contact on intergroup anxiety (Turner et al., 2007). Direct contact also had a significant indirect effect on negative beliefs about mental illness, via intergroup anxiety; thus, our fourth hypothesis was fully supported only with regard to direct contact, indicating that direct contact with mental illness (i.e., having friends or relatives with mental illness) can lead to less negative beliefs about mental illness, by reducing negative affect towards the mentally ill. Finally, direct contact also had a significant indirect effect on essentialist beliefs about mental illness, via intergroup

anxiety, which means that our fifth and final hypothesis was not entirely supported, given that we expected a direct effect of direct contact on essentialist beliefs; however, our results indicate that direct contact weakens essentialist thinking about mental illness by reducing intergroup anxiety, which is a novel finding, to the best of our knowledge. On the basis of ample relevant research evidence (Pettigrew & Tropp, 2008), we argue that lack of or limited contact experience with mental illness elevates anxiety about actual or future interaction with the mentally ill, a psychological state that is supposed to narrow attention focus (Stephan & Stephan, 1985) resulting in simplified stereotypic perceptions of outgroups, thus strengthening essentialization of mental disorders and negative beliefs about mental illness, both promoting social division and segregation (Haslam, 2011).

Our proposed comprehensive model of attitudes towards seeking professional psychological help, by adopting intergroup contact theory, was successful in integrating both potential barriers to help-seeking for mental health problems (negative beliefs about mental illness, essentialist beliefs about mental disorders, and self-stigma), and potential facilitators such as direct contact with mental illness. Subscribing to the view that "stigma explains only part of the puzzle why people might decide not to pursue mental health services" (Corrigan et al., 2014, p. 37), we believe that our model offers a comprehensive account of most of the studied variables and processes involved in shaping help-seeking attitudes.

Theoretical and Practical Implications

The present findings point to a number of important issues with theoretical and practical implications. A key issue concerns self-stigma. In our study, only self-stigma (and not public stigma) had a significant effect on attitudes toward help-seeking, which allows us to suggest that interventions should primarily address prevention of self-stigma, i.e., the internalization of public stigma (Vogel et al., 2013). Seeking psychological help can be a behavior confirming the negative stereotype held by society about mental illness (public stigma), thus rendering the negative stereotype personally relevant (self-stigma), resulting in distancing of the person involved from the relevant behavior (i.e., resulting in negative attitudes towards help-seeking). Adopting this view of self-stigma, it seems legitimate to suggest that interventions and strategies which counter stereotype threat (Crisp & Abrams, 2008) can be used to combat the self-stigma associated with mental illness. This brings us to the next issue, that of the (unintentional) harmful effects of biogenetic (essentialist) explanations of mental disorders. Neurobiological and biogenetic accounts of mental disorders, by inducing essentialist views about the mentally ill, absolve them of responsibility, blame and shame of their condition, but reinforce beliefs about dangerousness and the need for social restriction, thus legitimizing negative attitudes and beliefs about mental disorders (Kvaale, Gottdiener, & Haslam, 2013; Larkings & Brown, 2017). Moreover, biological explanations for mental disorders have been associated with prognostic pessimism, the notion that psychiatric conditions are relatively immutable and unlikely to remit (Lebowitz, 2014; MacDuffie & Strauman, 2017). Interventions that emphasize the malleability and non-deterministic nature of mental disorders, as well as the interplay between psychosocial and biological risk factors, may function to counteract or dispel stigmatizing attitudes towards or among symptomatic individuals.

Given that self-stigma of seeking psychological help was found to be the most proximal factor directly associated with attitudes toward help seeking, mental health professionals should develop and implement interventions aiming at reducing help-seeking stigma. Clinicians should try to normalize seeking psychological help, and challenge the idea that seeking help is a sign of personal weakness or inadequacy and that seeing a mental health professional needs to be hidden from others. Taking into account the significant indirect and total effects of direct contact with mental illness, intergroup anxiety, and negative beliefs about mental illness, on attitudes toward help seeking, interventions should aim at modifying these factors, too, in order to adequately address and improve attitudes toward seeking psychological help. However, we should acknowledge that these interventions should be complemented by policy changes to promote mental health care, and overcome provider-level and system-level barriers to care seeking (Corrigan et al., 2014).

Limitations

The present study has certain limitations. First, it is cross-sectional in design and is therefore limited in its ability to make causal inferences from the results. Longitudinal studies examining the relationship between contact, anxiety, beliefs, stigma, and help-seeking attitudes over time would allow for causal conclusions to be drawn. Second, it is based on a sample of Greek adults (the majority of them in full employment, of higher education, and predominately women), which might raise questions about the generalizability of the findings and necessitate study replication in different national contexts with larger samples of different levels of clinical severity. Third, only a moderate proportion of variance in attitudes toward seeking professional psychological help (20.0%) was accounted for by the variables included in our proposed model, although a quite satisfactory proportion of the variance in negative beliefs about mental illness (42.9%) was successfully accounted for. Future studies should consider including more variables that might influence attitudes toward help seeking (as proposed

by Clement et al., 2015; Kantor, Knefel, & Lueger-Schuster, 2017; Vogel, Wester, & Larson, 2007; Vogel, Wester, Wei, & Boysen, 2005), such as perceived need for help, mental health literacy, disclosure concerns, religious orientation and gender role ideology, fears regarding treatment, and treatment stigma, in order to account for a greater proportion of explained variance in attitudes. Fourth, reliance solely on the ATSPPH scale without a measure of intentions or actual help-seeking behavior, was another limitation. Further research is needed to address the impact of contact, beliefs, anxiety, and stigma on actually seeking professional psychological help. Finally, path analysis assumed that all variables were measured with perfect reliability. Given that measurement error in manifest variables can diminish power or distort path coefficients (Cole & Preacher, 2014), future studies should consider building and testing structural equation models using multi-item latent variables, as one method for reducing measurement error. When conducting statistical analyses, attention should be paid to issues of sample size and statistical power adequacy, given that underpowered studies are associated with some adverse consequences, such as reduced chance of detecting a true effect, inflated effect-size estimates, and low reproducibility of original results. A priori, instead of post hoc, power calculations have been recommended, using the existing literature in order to prospectively estimate the size of effects, as well as the sample size required for an intended level of power (Anderson, Kelley, & Maxwell, 2017; Button et al., 2013).

Conclusion

Only a small proportion of individuals who experience a mental health problem in their life will seek and receive adequate psychological treatment. Attitudes towards seeking professional psychological help can be considered a precursor of willingness of help-seeking and actual help-seeking. The present study successfully tested for the first time—to the best of our knowledge—a comprehensive model regarding psychological factors associated with attitudes towards seeking professional psychological help, showing that psychological research on intergroup contact and psychological essentialism can offer a plausible account of the processes involved in experiencing the stigma of mental illness and the ensuing negative attitudes towards seeking psychological help. The current study suggests that self-stigma of seeking psychological help can directly contribute to an individual's less favorable attitudes toward help-seeking. Moreover, negative beliefs about mental illness and intergroup anxiety can indirectly (through self-stigma) be associated with less favorable attitudes toward help-seeking. Finally, direct contact with mental illness and intergroup anxiety may have significant total indirect effects on attitudes toward help-seeking. This evidence suggests direct contact promotion and self-stigma decrease may be key active mechanisms in reducing negative attitudes toward help-seeking. Ultimately, findings from the current study represent progress towards understanding how to shape people's attitudes toward seeking professional help, so that they are more favorably disposed towards help seeking, when they experience mental health problems.

Compliance with Ethical Standards

Conflict of interest The authors Alexandra Hantzi, Fotios Anagnostopoulos, and Eva Alexiou declare that they have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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