CREATING RESILIENCE TO ONLINE VICTIMIZATION IN ADOLESCENTS USING WISE INTERVENTIONS

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1. INTRODUCTION

Bullying victimization can harm victims' mental health. Numerous studies have shown that, when an adolescent is a victim of cyberbullying, the risk of developing numerous mental health problems increases. Some of the most well-known problems are depression and social anxiety[1,2] but recent studies indicate that eating disorders are also common—because cyberbullying often attacks the victim's body image[1]—as are self-harming behaviors, especially of a non-suicidal nature[3]. In addition, these sequelae could be more prominent among girls[1].

In the last decade, cyberbullying has been added to presential victimization. Like traditional bullying, online forms of bullying affect victims' health mental health and well-being negatively[2]. Although the forms of offline and online psychological abuse coexist in relationships, there are a few factors that suggest that these are different problems. For example, in online abuse, the abusive messages and images may be forwarded by third parties, which implies some revictimization [4]. In addition, once an image, video, or information is disseminated on the Internet by the perpetrator, it can remain in cyberspace indefinitely, which means that the aggression can be extended and reach many people, making the humiliation especially harmful for the victim[5]. Finally, online victimization and bullying are mainly indirect, rather than face-to-face. The aggressor does not see the victim's reaction immediately, which can facilitate insensitivity and lack of empathy towards the victim and make it easier for those who would not dare to harass a classmate face-to-face to do so in online settings.

Tackling the problem of cyberbullying victims' worsening mental health involves at least (1) reducing bullying itself, as this would reduce the prevalence of victimization, and (2) building resilience in the victims so that their mental health does not worsen. In recent years, a number of preventive interventions have been developed aimed at reducing cyberbullying[6] but not so much focused on building resilience in the victims. Numerous experts indicate that the solution lies less in mitigating risks and dangers, and more in developing factors of protection and resilience to address the social and emotional problems linked to victimization[7]. In fact, previous interventions are valuable,

but they present some areas of improvement that pose challenges to scientific psychology. One such area of improvement is not specific to these interventions, but to all preventive interventions aimed at adolescents in general. Thus, according to important and rigorous meta-analytical studies, the effectiveness of these interventions is extremely limited. For example, in a review of 22 studies that examined the effects of interventions on peer bullying, only 11 studies (50%) showed significant effects in its reduction[8]. Interventions aimed at building resilience to potential victimization are even more limited, and yet, in recent years, the importance of developing programs aimed not only at reducing the risk of being a victim but also developing social and emotional protection against such victimization has been indicated [7,9].

Why do interventions for adolescents and young people fail?

Based on the results of various meta-analyses, the degree of development of a child or adolescent can act as an important variable that will moderate the impact of intervention programs[10,11]. However, there is some debate about how this moderation takes place. Some authors conclude that anti-bullying programs and programs to reduce other risky behaviors are more effective among adolescents than among children [10]. In contrast, other reviews and meta- analyses have concluded that the effects of interventions are minor in adolescence. For example, through hierarchical meta-analysis[11], they concluded that the effectiveness of traditional anti-bullying programs is limited as of adolescence, just at a time when these programs are extremely necessary.

Many universal preventive interventions are based on decision-making theories. They come from the premise that, if adolescents are provided with aspects such as risk information, as well as coping skills training, emotion regulation, and education in appropriate values, behavioral change will be facilitated. In this way, numerous interventions have been carried out aimed at preventing problems such as depression and bullying behaviors[6]. However, some features of adolescence can cause these approaches to fail. Compared to children, adolescents are more sensitive to being treated with respect and to the acknowledgment of their status and autonomy[12]. Therefore, if adolescents perceive that adults are trying to manipulate them or introduce behavior patterns that threaten their autonomy, they will often resist. In contrast, younger children can more easily

accept adult authority and curricular activities voluntarily[13].

Wise interventions: a new approach

Very recently, scientific social psychology has shown increased interest in a new approach to interventions, which have been labeled *"wise interventions"* . This approach involves a set of rigorous techniques, based on theory and research, that address specific psychological processes to help people improve in various life environments (for a review, see Walton & Wilson[14]). Wise interventions emphasize the subjective creation of meanings and how people interpret themselves and social situations. In this way, they can effectively change behavior recursively over time. These types of interventions have been applied to problems that can have a significant cost at personal, social, and economic levels. Many of these interventions have outstanding results because they tend to be very short and produce lasting changes in people's behavior. Indeed, in recent years, a proliferation of wise interventions has addressed countless social and personal problems. Thus, some wise interventions have been shown to improve academic performance, facilitate the social integration of young people from ethnic minorities, and reduce depression and aggressive behavior (Walton & Wilson[14]).

These types of interventions are of great interest in adolescence, as they can be designed so they are perceived as respectful towards the students' autonomy and status, so that the students will realize that they make their own decisions[12]. In fact, the results obtained with these types of interventions in adolescent behaviors are hugely promising. For example, Yeager and collaborators designed a universal brief intervention aimed at changing implicit beliefs about adolescent personality. This intervention, which teaches participants that "people can change" was effective in reducing symptoms of anxiety and depression and aggressive behavior in young people[15,16]. Recently, our team has adapted this intervention to Spanish adolescents and has carried out several studies to evaluate its effectiveness in depression and peer and partner bullying, obtaining important indicators of its effectiveness through randomized clinical trials. A relevant aspect of the findings is that the adolescents' degree of evolutionary development moderates the effects of the interventions. Thus, in those adolescents with a lower degree of pubertal development (biologically evaluated), or from lower academic courses, the intervention was more

effective[17,18]. This intervention included materials related to offline contexts, so in this project, we propose that the intervention can be modified and adapted to online scenarios to be more effective to prevent cyberbullying and its impact on victims' mental health.

2. OBJECTIVES AND HYPOTHESES

The main objective of this project is to extend the previous findings to the mental health effects of online victimization in adolescents. We shall design and evaluate the effectiveness of an wise intervention aimed at (1) reducing online bullying, as this would reduce the prevalence of victimization; and (2) building resilience in victims so that the negative impact of victimization on their mental health will be reduced. The working hypotheses are that (1) the frequency of aggressive online behaviors among adolescents receiving the intervention will be reduced compared to the control group, and (2) the intervention will buffer the predictive relationship between victimization and mental health problems (anxiety, depression, eating disorders, and self-injurious behavior).

The secondary objective will be to evaluate the moderating role of gender and the degree of development in the effects of the intervention. As the results of meta-analytical studies for some psychological problems indicate that preventive interventions are more effective in the most vulnerable groups[19], gender is expected to moderate the effectiveness of the intervention, such that it will be more effective for behaviors that are most prominent for each gender. In this way, for example, the effect on eating disorders or depression is expected to be greater in girls than in boys. As for the degree of evolutionary development, the results of previous studies are inconsistent, with some pointing to greater effectiveness of preventive interventions in adolescents than in children[10] and others pointing in the opposite direction[12]. Contributing new empirical evidence to help clarify the inconclusive findings of previous studies is of great importance for the adequate timing of the implementation of preventive interventions. Finally, potential change mediators such as attitudes towards cyberbullying and the intention to use stress management strategies will be explored.

3. METHODOLOGY

Design and Procedure

An experimental study will be carried out with two parallel groups. Participants will complete an online evaluation protocol through Qualtrics, including different questionnaires at three measurement times: (1) pretest (one week before the intervention), (2) 3-month follow- up, and (3) 6-month follow-up.

The study will be carried out with the approval of the Ethics Committee of the University of Deusto. Informed consent from parents and adolescents will be required. Participants should not indicate their first and last names on the completed protocols, which will be paired over time through a code known only to each participant.

Participants

Recruitment will take place through schools. Participants will be students of Secondary Compulsory Education (SCE) and high school. The final sample will be approximately 600 adolescents (300 in each group). The proportion of participants will be balanced according to gender and educational level, as the role of both variables as potential moderators of the effectiveness of the intervention will be examined.

Interventions

Two intervention models both of similar duration (approximately 1 hour) and structure will be used, and the wise intervention will be compared to an educational control intervention.

1. Wise Intervention: Continuing with the line of work of the previous projects, the intervention will be based on four general types of change strategies: (1) scientific knowledge,
(2) generation of new meanings, (3) commitment through action, and (4) active reflection. This will include activities such as reading scientific information about social behavior and its role in people's well-being and mental health, the meaning of online victimization experiences and ways to react to them, experiences of other young people of their age, and self-persuasion exercises that involve an active commitment to change.

2. Educational control intervention. The control intervention will involve scientific information and education about internet risks such as sexting and grooming. It will have a parallel format to the wise intervention and a similar duration.

Measures

The objective variables of this research will be measured through pre-validated self- report questionnaires with evidence of appropriate psychometric properties:

The Spanish-adapted and validated version [20]of the ***Functional Assessment of Self- Mutilation*** (FASM[21]) scale will be used to evaluate self-reported self-harm by adolescents. The FASM scale measures Non-Suicidal Self-Harm (NSSH) through several questions divided into three parts. The 6 most representative items of its first part will be used. It presents a list of forms of self-harming behaviors without suicidal intent about which participants are requested to indicate whether or not they occurred in the last year, as well as their approximate frequency. These NSSH behaviors can be classified as moderate/severe or minor, depending on their severity. The FASM scale has shown good psychometric properties, both internal consistency and convergent validity, with measures of suicidal ideation and hopelessness and post- traumatic and/or depressive symptoms. The Spanish version has also shown suitable psychometric properties in adolescent samples[20].

The Spanish and brief version [22]of the scale of the ***Center for Epidemiologic Studies-Depression*** [CES-D][23]) will be used to analyze depressive symptoms. The brief CES-D consists of 10 items associated with depressive symptoms, to be rated on a four-point Likert frequency scale ranging from 0 (*practically never*) to 3*(almost all the time*). It has a sensitivity of 77.8% and a specificity of 74.1%. The CES-D has been widely used in adolescents, showing appropriate psychometric properties of reliability for the Spanish-adapted version (Cronbach α

= .83[23] including the short version (Cronbach α = .86)[22].

The symptomatology of social anxiety will be evaluated with the short form[24] of the Spanish version of the ***Social Anxiety Scale for Adolescents*** (SAS-A[25]). The short form of the SAS-A contains 12 items that measure three factors of social anxiety: Fear of Negative Assessment, Anxiety in New Situations, and General Social Avoidance. The items are rated on a five-point scale, ranging from 1 (*not at all*) to 5 *(all the time*). The Spanish version showed

adequate psychometric properties[25], for example, excellent alpha coefficients (Cronbach α = .92).

A short version of the ***Eating Attitudes Test***[26] (EAT-8[27]) will be used to evaluate the symptomatology associated with eating disorders. The EAT-8 is a self-reporting screening questionnaire consisting of 8 items. A six-point response scale ranging from 1 *(never) to 6 (always)* will be used for this study. The EAT-8 has shown satisfactory psychometric properties in the general population[27].

The reduced version of the **Cyberbullying Questionnaire** (CBQ) will be used to measure the degree of victimization and perpetration of cyberbullying[28]. It consists of two subscales of 9 items (each) that evaluate the frequency of (a) victimization and (b) perpetration. Participants respond on a five-point frequency scale, ranging from 0 (*never*) to 4 *(5 or more times*). The CBQ has adequate psychometric properties of convergent and construct validity and internal reliability.

The eight-item ***Implicit Theories of Personality***[29] questionnaire will be used to evaluate the degree to which theories about malleability (incremental theory) or stability (entity theory) of personality are adopted. The items were adapted to bullying situations in schools (e.g., "bullies and victims are types of people who can't really change"). Response options are rated on a seven-point scale, ranging from 1*(completely disagree*) to 6 *(completely agree*), with higher scores indicating stronger adoption of the entity theory (i.e., the belief that people do not change). The psychometric properties of internal consistency in samples of Spanish adolescents are good (Cronbach α = .83).

Ad hoc measures will be included to assess attitudes towards cyberbullying and behavioral intentions. To evaluate the intention to use different strategies when the adolescent is exposed to diverse stressors, participants will complete six items on a four-point response scale ranging from 0 (*never or almost never*) to 3 (*always or almost always*). Some examples of items are: "Talking to someone else so they can listen to me and help me," "Doing sports or some exercise".

Ethical considerations

This study aims to develop and implement interventions that will be beneficial for the participating adolescents and other people in the future, by helping to increase their psychological well-being. Through randomization, the principle of justice will be respected, allowing all participants to have similar opportunities to receive the intervention. Gender will be considered and a similar number of male and female participants will be included in each condition.

The risks are minimal and limited to answering psychological tests on stressors, psychological symptoms, and cognitive styles. Previous experience with the same questionnaires indicates that the risk is minimal. Adolescents can also decide to end their participation at any moment. Researchers collecting data will be trained to attend to any difficulty that could emerge while participants are responding to the questionnaires. The researchers will give an alternative task (e.g., educational readings) to those participants who decide to end their participation.

Informed consent forms will be sent to parents or legal guardians and adolescents will also receive information.

After completing measures, adolescents will be provided with information on services for adolescents (e.g., phone number of attention to adolescents). From an ethical perspective, the most important care aspect is the protection of information. We will follow the Directive 95/46/EC of the European Parliament*, Organic Law 15/99 of 13 December of Personal Data Protection*, and of the Council of 24 October 1995 on the protection of individuals concerning the processing of personal data and the free movement of such data. No identification data, such as names or surnames, will be used; instead, we will use a numeric code to match measures across times and sources. Thus, each adolescent, and only they, will know their code. We will also follow the procedure for data protection that the University of Deusto has registered in the National Data Protection Agency. The project has been approved by the Ethics in Research Committee of the University of Deusto.

Statistical analysis Plan

We shall use various statistical analysis strategies, including Hierarchical Linear Modeling with HLM 7.03, using the FIML estimation method. Level 1 will include repeated measures in the dependent variables (cyberbullying, depression, social anxiety, eating disorders, and self-harming behaviors). Level 2 will include the experimental condition, using dummy variables, together with gender and educational level (through dummy variables), as well as the interaction terms between experimental conditions and those variables. The third level will include the average level of cyberbullying in the classroom in which the participant is located to control its influence. The moderating effect of the intervention on the longitudinal relationship between victimization and mental health will also be evaluated by structural equation modeling with the LISREL 9.2 and MPLUS-7 programs.

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