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# Happy classes make happy students: Classmates' well-being predicts individual student well-being

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ABSTRACT

Student well-being has mostly been studied as an individual phenomenon with little research investigating how the well-being of one's classmates could influence a student's well-being. The aim of the current study was to examine how the aggregate well-being of students who comprise a class could predict students' subsequent well-being (Time 2 well-being) after controlling for the effects of prior well-being (Time 1 well-being) as well as key demographic variables such as gender and age. Two studies among Filipino secondary school students were conducted. In Study 1, 788 students from 21 classes participated; in Study 2, 404 students from 10 classes participated. For Study 1, questionnaires assessing students' life satisfaction, positive affect and negative affect were administered twice seven months apart. For Study 2, the well-being questionnaires were administered twice, three months apart. Hierarchical linear modeling was used with level 1 (Time 1 individual well-being, gender, and age) and level 2 (class well-being) predictors. Results across the two studies provided converging lines of evidence: students who were in classes with higher levels of life satisfaction and positive affect were also more likely to have higher life satisfaction and positive affect at Time 2. The study indicated that the well-being of a student partly depends on the well-being of their classmates providing evidence for the social contagion of well-being in the classroom context.

## 1. Introduction

"While there are many determinants of happiness, whether an individual is happy also depends on whether others in the individual's social network are happy" (Fowler & Christakis, 2008, p. 7). For students, the class is one of the key social networks they find themselves embedded in. Students spend a lot of time with their classmates, as much as 30 h or more per week (Hofferth & Sandberg, 2001; Larson, 2001). It seems likely, therefore, that a student's happiness will be influenced by how happy his or her classmates are.

Numerous studies have shown that student well-being is closely related to better learning, greater engagement, and more optimal functioning (see Seligman, Ernst, Gilham, Reivich, & Linkins, 2009, for an overview), which makes the investigation of the factors associated with student well-being crucial. Most well-being studies, however, have examined it as an individual phenomenon. For example, researchers have investigated factors such as genetics, personality traits, health, income, and social status among others as antecedents of well-being (Ryan & Deci, 2001). Research on youth well-being has also followed an individual differences approach (Garcia, 2011; Gilman & Huebner, 2006; Huebner, Drane, & Valois, 2000; Suldo, Minch, & Hearon, 2015) though there is growing

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awareness of the power of social context in shaping well-being (Huebner, Gilman, & Ma, 2012; Huebner, Hills, Sidall, & Gilman, 2014; Tian, Zhao, & Huebner, 2015).

Recent studies on social contagion have shown how psychological states, behaviors, and emotions can spread in a social network (see Christakis & Fowler, 2013 for an overview). It seems theoretically plausible to assume that the well-being of one's classmates will also exert a crucial impact on one's own well-being. However, to our knowledge, there has been no previous study that explored this assumption. Although there a few studies have been conducted on how well-being spreads in peer networks (Dishion & Tipsord, 2011; Giletta, Burk, Scholte, Engels, & Prinstein, 2013; Parker et al., 2015; Van Workum, Scholte, Cillessen, Lodder, & Giletta, 2013), the findings from these studies cannot be assumed to apply to the class level. Classes are much larger than the average peer network, and students usually have no choice in choosing their classmates but have more agency in selecting who they want to be friends with. Studies on contagion among naturally-occurring peer networks may be potentially confounded with homophily effects. Homophily, in layman's terms, refers to birds of the same feather flocking together (McPherson, Smith-Lovin, & Cook, 2001). Therefore, studies that examine contagion effects in a class are needed.

In this study we examined how class well-being (the average well-being of students in a classroom) could be linked to individual student well-being. We controlled for students' previous levels of well-being (Time 1 well-being), and examined whether class well-being is a unique predictor of subsequent well-being measured at Time 2. We conducted two studies and examined whether the results would generalize across different samples. If the results generalize across the two samples, we would have greater confidence in the robust nature of the results obtained.

### 1.1. Well-being and contagion

Subjective well-being (SWB) has three basic components: life satisfaction, positive affect, and negative affect (Diener, Suh, Lucas, & Smith, 1999). Life satisfaction pertains to a person's cognitive evaluation with how satisfied he/she is with one's life. Positive and negative affect refers to the presence of positive (e.g., feeling inspired and alert) and negative (e.g., feeling irritated and anxious) emotional states. SWB has been found to be a key predictor of motivation, engagement, and achievement (Fogarty, Davies, MacCann, & Roberts, 2014; King, McInerney, Ganotice, & Villarosa, 2015; Lewis, Huebner, Malone, & Valois, 2011; Seligman et al., 2009; Suldo, Riley, & Shaffer, 2006; Suldo & Shaffer, 2008). As Seligman et al. (2009) declared, “More well-being is synergistic with better learning” (p. 294).

Social contagion refers to the fact that psychological states can spread like virus within a social group (Boyles, 2008). Studies have found that psychological states (e.g., passion), behaviors (e.g., smoking and drinking), emotions (e.g., positive moods, anxiety), motivational states, and even physical outcomes (e.g., obesity) can spread through social networks (Ali, Amialchuk, Gao, & Heiland, 2012; Christakis & Fowler, 2013; Poirier, Brendgen, Vitaro, Dionne, & Boivin, 2017; Radel, Sarrazin, Legrain, & Wild, 2010).

More relevant to the focus of the current study on well-being, psychologists have found that feelings can also pass from one person to another (Totterdell, 2012). Feelings that are “caught” can be negative (e.g., anxiety, sadness) or positive (e.g., happiness, enthusiasm) (Totterdell, 2012). For example, studies have found that even after controlling for a wide range of factors, a person's levels of depression (Rosenquist, Fowler, & Christakis, 2011) and happiness (Fowler & Christakis, 2008) are strongly associated with their friends', spouses', siblings', and neighbors' depression and happiness. Totterdell (2000) found a significant association between the happiness of professional cricket players during a match and the average happiness of their teammates. He and his colleagues also found the same social contagion effect among nurses and office workers (Totterdell, Kellett, Teuchmann, & Briner, 1998). Golberstein, Whitlock, and Downs (2013) documented that college roommates' psychological distress and anxiety were “caught” by their roommates, even after only three months of staying together.

The spread of well-being may be accounted for by several mechanisms. One possible mechanism is through motor mimicry and corresponding bodily feedback (Chartrand & Lakin, 2013). For example, if someone near you smiles, you are also more likely to smile. This occurs automatically and without conscious awareness. In turn, your smile will tell you that you are (at least a little) happy yourself (Parkinson, 2011). This bodily feedback phenomenon has been demonstrated in a clever experiment wherein people who held a pen with their mouths in a way that made them smile felt more positive than those who did not (Strack, Martin, & Stepper, 1988).

While the aforementioned mechanism is largely unconscious, mood contagion may also be induced through conscious cognitive effort (Totterdell, 2012). Individuals may want to attune themselves to others in order to improve the quality of social interactions. This may be particularly relevant to adolescent students who pick up the social cues of their peers quite easily as they are especially sensitive to the possibility of being rejected (Albert, Chein, & Steinberg, 2013).

The social contagion of well-being may also occur through modeling. For example, Haeffel and Hames (2014) found that college roommates' cognitive vulnerability (cognitive style of interpreting stressful life events) can be modeled and be “caught” by one's roommate. Changes in cognitive vulnerability, in turn, are proximal predictors of depression. The social contagion of cognitive vulnerability was evident after only three months of being roommates. For example, students in a class may model their classmates' way of interpreting events, which may have a proximal impact on their well-being.

However, there may be other possible ways for contagion to occur which do not require physical contact. Kramer, Guillory, and Hancock (2014) conducted a large-scale online experiment using Facebook and manipulated the emotional content of the News Feed that participants received. For the positive emotion group, the experimenters reduced their exposure to negative emotional content in their News Feed; while for those in the negative emotion group, exposure to positive emotional content in News Feed was reduced. Results provided evidence for social contagion, with the positive emotion group experiencing more positive emotions and the negative emotion group experiencing higher levels of negative emotion. This occurred even in the complete absence of physical contact.