A Person-Centered Approach to Profiling COVID-Related Experiences in the United States: Preliminary Findings from the Epidemic-Pandemic Impacts Inventory (EPII)

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The Epidemic-Pandemic Impacts Inventory (EPII) can be viewed and downloaded at the following link: bit.ly/UCONN-EPII

EPIDEMIC-PANDEMIC IMPACTS INVENTORY

Abstract

The COVID-19 pandemic has had a profound impact on individuals, families, and communities around the world. Intensive health precautions have created constraints on mobility, work, education, family life, and interpersonal relationships. Preliminary survey studies have reported an increase in the prevalence and severity of psychosocial impairments in the pandemic's immediate wake. However, the impact of specific pandemic-related experiences and patterns of experiences has not been systematically assessed and studied. The goal of the present study was to develop and conduct a preliminary empirical test of a novel, comprehensive assessment of pandemic-related experiences, the Epidemic-Pandemic Impacts Inventory (EPII), using person-centered latent class analysis (LCA). Aims were to (1) test the hypothesis that LCA would identify unique subgroups based on patterns of negative and positive pandemic-related experiences across personal and social domains, and (2) examine whether identified subgroups would significantly differ on sociodemographic characteristics and indicators of mental health and functioning. Results supported hypotheses, with several unique subgroups identified across domains that were differentiated on sociodemographic characteristics and measures of perceived stress, depression, anxiety, PTSD, and perceived social support. Findings support the EPII as an instrument for measuring tangible and meaningful experiences in the context of an unprecedented pandemic disaster. This study, combined with future research with the EPII, may serve to inform public health strategies for supporting families and communities in the current pandemic and under similar mass public health crisis circumstances in the future.

Keywords: pandemic, epidemic, COVID-19, mental health

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The first COVID-19 case was formally identified in Wuhan, China on December 31, 2019 and on January 30, 2020, the World Health Organization declared a Public Health International Emergency (https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200130-sitrep-10-ncov.pdf?sfvrsn=d0b2e480_2). By the end of April, after only three months since the first documented COVID-19 case in the U.S., more than 1 million cases and 60,000 deaths due to COVID-19 had been reported in the U.S. (<https://coronavirus.jhu.edu/map.html>). In three months, the coronavirus had gone from an obscure phenomenon, apparently isolated to a limited area on the other side of the world, to a major epidemic in the U.S.

In the first three-month period, the COVID-19 pandemic has had a profound impact on individuals, families, and communities across the world. Intensive health precautions have created constraints on mobility (e.g., sheltering in place, self-quarantining), work and schooling (e.g., virtual commuting, home schooling), family life (e.g., more intensive contact in primary household relationships, separation from extra-household family members), and interpersonal relationships (e.g., social distancing, wearing masks). A number of survey studies have found evidence of an increase in the prevalence and severity of mental health problems (e.g., anxiety, depression, stress disorders, insomnia) in the pandemic's immediate wake (Brooks et al., 2020; Duan & Zhu, 2020; Golberstein, Wen, & Miller, 2020; Gunawan, Juthamanee, & Aungsuroch, 2020; Hahad, Gilan, Daiber, & Münzel, 2020; Hiremath, Suhas Kowshik, Manjunath, & Shettar, 2020; Khan et al., 2020; Liu et al., 2020; Santos, 2020; Torales, O'Higgins, Castaldelli-Maia, & Ventriglio, 2020; Wang, Horby, Hayden, & Gao, 2020; Zhang & Ma, 2020). However, the impact of specific pandemic-related experiences or patterns of experiences, both negative and positive, on functioning has not been systematically assessed, yet is necessary for identifying potentially modifiable factors towards developing public health strategies for prevention or intervention.

The goal of the present study was to develop and conduct a preliminary empirical test of a comprehensive assessment of pandemic-related experiences called the Epidemic-Pandemic

Impacts Inventory (EPII; Grasso, Briggs-Gowan, Ford, & Carter, 2020). The EPII is a 92-item inventory of experiences that extend across several personal and social life domains including influences on employment and work life, household composition and functioning, childcare issues, schooling, social engagements, and emotional and physical health. Respondents answer questions about experiences within their household. The EPII is currently maintained in the National Institute of Health (NIH) Disaster Research Response (DR2) Repository of COVID-19 Research Tools (<https://dr2.nlm.nih.gov>).

After an initial outbreak in the Pacific Northwest, the epicenter in the U.S. was in Northeastern states, especially Massachusetts, New York, New Jersey, and Connecticut (<https://coronavirus.jhu.edu/map.html>). Therefore, the initial dissemination of the EPII was done through internet media that concentrated on the Northeastern U.S. region. The survey yielded 652 usable responses obtained in a 4-week period from April 15 to May 15, 2020. The purpose of the current study was to obtain preliminary support for the EPII as a tool for assessing meaningful experiences associated with COVID-19 by identifying unique profiles of individuals characterized by pandemic-related experiences that link to psychosocial functioning.

Latent class analysis (LCA), a person-centered, data-driven approach for clustering individuals on a set of characteristics, was employed to evaluate the EPII because standard statistical methods grounded in classical test theory are inappropriate for modeling event type data (Felix et al., 2019). Classical methods treat items as indicators of latent constructs and assume an underlying, normally distributed latent variable or variables comprised of correlated indicators. Although certain exposures may co-occur more frequently than others, they do not consistently correlate across individuals the way that, for example, depressive symptoms do. Alternative approaches have involved summing exposures or events to create a composite or continuous sum score of exposure types. While this cumulative exposure approach is practical and statistically robust in predicting outcomes, drawbacks include erroneous assumptions that: (1) all items are equally associated with a particular outcome, (2) distances between sum scores are proportionately associated with an outcome (i.e., each additional exposure conveys the

same increase in exposure load or risk of outcome), and (3) equivalent sum scores representing different combinations of items convey the same risk on an outcome (Netland, 2001). As such, the cumulative exposure approach offers little to be learned about risk specific to individual exposures or unique constellations of co-occurring exposures on outcomes.

In contrast, LCA uses maximum likelihood methods to empirically classify individuals into subgroups or classes based on probabilistic patterns of co-occurring exposures. LCA is arguably superior to the cumulative risk approach in that it is not bound to linear assumptions and can be used to test the significance of different combinations of exposures on outcomes. The trauma exposure field has seen a burgeoning of studies using LCA to identify unique subgroups of individuals with different combinations of exposures in samples of young children (Grasso, Petittclerc, et al., 2016), children in child welfare (Grasso et al., 2013), justice-involved youth (Ford, Grasso, Hawke, & Chapman, 2013), treatment seeking youth (Dierkhising, Ford, Branson, Grasso, & Lee, 2019; Grasso, Dierkhising, Branson, Ford, & Lee, 2016), and a high risk pregnancy sample (Goldstein, Briggs-Gowan, & Grasso, 2020). Additionally, to our knowledge, there has only been one study that has applied LCA to disaster-specific experiences for examining the impact of flooding on community and family circumstances (Felix et al., 2019). The latter study identified four unique profiles that were differentially associated with depression, anxiety and PTSD symptoms.

The current study applied LCA to pandemic-related experiences assessed with the EPII in a survey conducted in the Northeast region of the U.S. The first aim was to test the hypothesis that pandemic-related experiences endorsed on the EPII could empirically reveal unique subgroups of individuals characterized by patterns or combinations of experiences using exploratory, person-centered LCA. A second aim tested the hypothesis that identified subgroups would significantly differ on sociodemographic characteristics and indicators of mental health and functioning. If supported, these hypotheses would support validity of the EPII in assessing specific pandemic-related experiences that meaningfully relate to psychosocial functioning and that may be critical for prevention and intervention efforts in the context of future disasters.

Method

Procedures

An anonymous online survey using Qualtrics Survey Software was deployed via advertisements posted on social media (Facebook, Twitter, Instagram, Reddit), listservs, and ResearchMatch.org to recruit a convenience sample of adults residing in the Northeast region of the U.S. The survey was comprised of measures obtaining: (1) sociodemographic characteristics, (2) negative and positive pandemic-related experiences on the EPII, (3) perceived stress, (4) symptoms of depression and anxiety, (5) PTSD symptoms, and (6) perceived social support. Completion of the survey implied consent. Upon completion, participants could opt to enter a lottery to receive a \$25 electronic gift card (1/100 draw).

Four quality checks were implemented throughout the survey in the form of multiple-choice questions in which the correct answer was embedded in the question. Incorrectly answering the first quality check resulted in a warning that the survey would be discontinued if any one of the subsequent quality checks were incorrectly answered. Forced response prevented missing data. For each item, participants could opt to select "*I choose not to respond.*" This happened infrequently. When this occurred for measures of psychological constructs, items were imputed with the average of items within their respective scale. The average number of non-disclosed items for each measure was < 0.25%. The study protocol was reviewed by the University of Connecticut Health Center Human Subjects Review Board and deemed exempt.

Sample Characteristics

The survey documented a total of 853 responses over a 4-week period. Among the 853 responses, 201 (23.6%) failed the quality check forcing the survey to discontinue. This resulted in an analytic sample of 652 (76.4%). Table 1 presents sociodemographic characteristics. The majority of the sample resided in Connecticut (45.1%), where the survey originated. Respondent age ranged from 18 to 85 ($M = 47.01$, $SD = 14.36$). Most of the sample self-identified as female (83%), White (89.1%), and Non-Hispanic/Latinx (94.8%). Only 8% reported an annual

household income <\$20,000 and 16.5% reported no insurance or receiving Medicaid/Medicare. The majority of the sample reported owning or renting their home (88.2%), having earned a bachelor's degree or higher (75.8%), and being in a long-term relationship (71.5%). Most of the sample reported being currently employed (61.3%). Students comprised 9.4% of the sample.

Measures

The Epidemic-Pandemic Impacts Inventory (EPII; Grasso et al., 2020). The EPII is a 92-item inventory of pandemic-related experiences across several life domains: Work Life (12-items), Home Life (19 items), Social Activities and Isolation (18-items), Emotional/Physical Health and infection (24-items), and Positive Change (19-item). All domains except for the Positive Change domain index negative or adverse experiences. Each item has a response set of “Yes, *Me*”, “Yes, *Person in Home*”, “No”, and “*Not Applicable*”, except for items 42, 43, and 65, which pertain to the household more globally. The first two responses can be mutually inclusive. The second response (“Yes, *Person in Home*”) can pertain to family or non-family living in the home and is conceptualized as having potential impact on the respondent. For the purposes of this paper, the two “Yes” responses were collapsed, as were the “No” and “N/A” responses, which resulted in dichotomous indicators.

The Patient Health Questionnaire (PHQ-9; Kroenke, Spitzer, & Williams, 2001). The PHQ-9 is a 9-item self-report measure of depressive symptoms over the past two week that range from 0 (“*Not at All*”) to 3 (“*Nearly Every Day*”). Total score ranges from 0-27. It has established construct validity and excellent test retest reliability ($r = .84$; Kroenke et al., 2001). In the present study, internal consistency was .88. The average number of non-disclosed/imputed items across participants was 0.15%.

The GAD-7 (Spitzer, Kroenke, Williams, & Löwe, 2006). The GAD-7 is a 7-item self-report measure of generalized anxiety disorder symptoms over the past two weeks that range from 0 (“*Not at All*”) to 3 (“*Nearly Every Day*”). Total score ranges from 0-21. It has good convergent validity with other anxiety scales and excellent test-retest reliability (intra-class correlation =

0.83; Spitzer et al., 2006). In the present study, the internal consistency was .92. The average number of non-disclosed/imputed items across participants was 0.22%.

The Primary Care PTSD Screen for DSM-5 (PC-PTSD-5; Prins et al., 2016). The PC-PTSD-5 is a self-report measure of DSM-5 defined PTSD symptoms. Five Yes/No items assess symptoms yielding a continuous symptom score ranging from 0-5. Previous research has demonstrated that the PC-PTSD-5 predicts PTSD diagnosis with a high degree of accuracy and has good test retest reliability (Prins et al., 2016). In the present study, the internal consistency was .75. The average number of non-disclosed/imputed items across participants was 0.01%.

The Duke-UNC Social Support Questionnaire (Broadhead, Gehlbach, de Gruy, & Kaplan, 1988). The Social Support Questionnaire is a 5-item self-report measure assessing one's perception of the availability of support or assistance to fulfill needs. Each item assesses the degree/quantity to which a person feels that they have access to different indicators of social support using a 5-point Likert scale ranging from 0 ("*None of the Time*") to 5 ("*All of the Time*"). The Social Support Questionnaire has convergent validity with other measures of social support and general health and good two-week test-retest reliability ($r = .66$; Broadhead et al., 1988). In the present study, the internal consistency was .88. The average number of non-disclosed/imputed items across participants was 0.15%.

Analytic Approach

Descriptive statistics were calculated with Mathworks Inc. Matlab software (2020a). Distributional properties of dependent variables were examined for non-normality and all measures fell within the acceptable range for skewness and kurtosis (± 2). The primary statistical method employed was exploratory latent class analysis (LCA) using Mplus software (version 8.0). Indicators included dichotomous items from the EPII. The "Yes, *Me*" and "Yes, *Person in Home*" response options were collapsed such that either or both represented a positive item. The "No" and "N/A" response options were collapsed to represent a negative item. Only items with a base-rate of $\geq 5\%$ were included in LCAs, with 16 of 92 items (17.4%) omitted.

LCA was applied separately to the remaining items within broader conceptual categories; i.e., Work Life (11 indicators), Home Life (13 indicators), Social Activities and Isolation (17 indicators), Emotional/Physical Health and Infection (16 indicators), and Positive Change (19 indicators). For each domain, LCA was applied in several steps. Indicators were entered into the LCA beginning with one class and adding classes incrementally until a unique solution could not be determined with maximum likelihood (ML) methods. Several fit indices were examined. The Bayesian information criteria (BIC) is interpreted such that the lowest value is considered the best fit (Schwartz, 1978). The Lo-Mendell-Rubin (LMR) adjusted likelihood ratio test (Lo, Mendell, & Rubin, 2001) provides comparisons between models, such that nonsignificant values indicate the model with one additional class is not a statistically improved fit over the current model. Entropy values were used to evaluate the quality of classes and ranged from 0 to 1, with values closer to 1 representing better separation of classes (Ramaswamy, DeSarbo, Reibstein, & Robinson, 1993). Univariate entropy scores were examined to evaluate the relative contribution of individual items in separating classes.

To examine associations between classes and continuous variables, we used the Mplus DU3STEP procedure described by Vermunt (2010) and Asparouhov and Muthen (2014). Associations between classes and dichotomous variables were examined using the Mplus DCAT procedure described by Lanza, Tan, & Bray (2013). These procedures follow 3-steps: (1) the LCA is estimated without covariates or distal outcomes, (2) the highest probability of class membership is used to assign classes, and (3) associations between class membership and outcomes are estimated with an adjustment based on classification uncertainty. These methods perform well when class separation is sufficient (i.e., entropy > .60). Exceptions are noted in the tables where the Mplus DCON procedure (Lanza et al., 2013) was used in place of the preferred DU3STEP procedure due to non-convergence of the model. Alpha was adjusted for pairwise comparisons using the Bonferroni procedure.

Results

EPII Item Base Rates

The frequencies of endorsements of items by response option are presented in Supplemental Table 1. A total of 16 items had a base-rate $\leq 5\%$ for either “Yes, *Me*” or “Yes, *Person in Home*” and ultimately were not included in the LCA. These included more extreme exposures (e.g., increase in physical conflict with a partner or children in the home, unable to access clean water, unable to access medical care for a serious condition, and living apart from family). Relatively high base-rate items ($>80\%$) included being separated from family or close friends, having family celebrations cancelled or restricted, planned travel or vacations cancelled, inability to do enjoyable activities or hobbies, more time sitting down or being sedentary, and in terms of positive change, more appreciative of things usually taken for granted.

LCA Fit Indices and Class Solutions

All fit statistics are presented in Supplemental Tables 2 – 6 where the optimally supported class model is highlighted in bold. Home Life, and Positive Change domains had best-fitting class solutions of 4 classes, whereas the Work Life, Social Activities and Isolation and Emotional/Physical Health and Infection had best-fitting solutions of 5 classes. Supplemental Table 7 presents average posterior probabilities for class membership across EPII domains. Average posterior probabilities for ‘most likely class membership’ were high, ranging from 0.78 to 0.94. Supplemental Table 8 presents univariate entropy scores for all items across domains, with higher values reflecting greater contribution to class separation. The following sections characterize the classes within each domain and class differences on sociodemographic characteristics, cross-domain counts of total experiences, past trauma and adversity types, and psychological constructs that include perceived stress, PTSD, depression, anxiety, and perceived social support. Tables 2 – 6 provide data comparing classes on these variables and overall findings are briefly summarized in the text.

Work Life

Classes. The Work Life LCA had a best-fitting model of 5 classes with 11 indicators (see Figure 1). Items with the highest univariate entropy scores included having to disinfect the home due to close contact with potentially infected people at work, continuing to work despite infection

risk, and having a hard time doing their job well because of needing to take care of people in the home. Class 1 comprised nearly a quarter of the sample (22.7%) and was most differentiated by working despite close contact with infected individuals, time disinfecting the home, difficulty transitioning to working from home, and providing direct care to infected people. Class 2 (7.7%) was most differentiated by having a low probability of reduced work hours or infection risk at work and high probability of having difficulty doing their job well because of needing to care for people in the home, and difficulty transitioning to working from home. Class 3 (9.1%) was differentiated by having a high probability of being laid off, having reduced work hours, or having to close one's business. Class 4 (8.1%) had overall high probability across items; however, had especially high probability of having close contact with infected people, increased workload, time disinfecting home, difficulty doing job well because of caring for people in the home, and inability to go to school or train. Finally, Class 5 comprised more than half of the sample (52.5%) with overall low probability of exposure across items within this domain.

Class comparisons. See Table 2. Class 5 was most likely to be 60 years or older, and to live alone or have a person older than 60 in the home. Classes 3 and 5 were least likely to have a child or adolescent in the home. Class 4 had the highest proportion of individuals living with a partner and was most likely to be employed. Class 3 was most likely to have been laid off or unemployed. Class 4 had significantly more Work life experiences than all other classes. Classes 1 and 5 had relatively fewer Home Life and Emotional/Physical experiences compared to all other classes. Class 3 had significantly more Social/Isolation experiences than Classes 2 and 5. Class 5 had the least amount of positive experiences relative to Classes 1, 3, and 4.

Classes 2 and 4 had higher mean levels of perceived stress than Classes 3 and 5. Class 5 had relatively lower levels of depression and anxiety. Class 1 had significantly greater perceived social support than Classes 3, 4, and 5.

Home Life

Classes. The Home Life LCA had a best-fitting model of 4 classes with 13 indicators. Items with the highest univariate entropy scores included unavailable childcare, more conflict

with child or harsher discipline, and having to take over child instruction. Class 1 comprised 15.6% of the sample and was differentiated by moderate probability of having to take care of friends and family and had the highest relative probability of having increased verbal conflicts with adults in the home and having a child unable to go to school. Class 2 (13.3%) had moderate probability of having childcare issues and needing to instruct a child, as well as having a high probability of experiencing more conflict or behavioral issues with a child. Class 3 (5.8%) had the highest probability of having childcare issues, having a child unable to go to school, and having increased conflict with a child or using harsher discipline. Finally, Class 4 comprised the majority of the sample (65.2%) and had overall low probability of exposure across items.

Class comparisons. Class 4 was most likely to be 60 or older and to live alone. Class 1 was most likely to be 29 years old or younger. Classes 2 and 3 were most likely to be living with a partner and to have a child or adolescent living in the home. Classes 1 and 4 were most likely to have a person older than 60 living in the home. Class 1 was most likely to be a student.

Class 4 had the significantly fewer Work Life and Home Life experiences than all other classes. Class 3 had significantly more Home Life experiences than Classes 1 and 2. Classes 1 and 3 had significantly more Social/Isolation experiences than Classes 2 and 4. Class 3 had significantly more Emotional/Physical experiences than all other classes and Class 1 had more experiences in this domain than Classes 2 and 4.

Classes 1 and 3 were significantly more likely to have a history of non-interpersonal trauma exposure than Classes 2 and 4. Class 1 was also more likely to have a history childhood trauma and non-partner violence than Class 4 and more likely to have a history of domestic violence than Class 2. Classes 1 and 3 had higher mean levels of PTSD, perceived stress, depression, and anxiety compared to Classes 2 and 4. Class 2 had greater perceived social support than Class 1.

Social Activities and Isolation.

Classes. The Social Activities and Isolation LCA had a best-fitting model of 5 classes with 17 indicators. Items with the highest univariate entropy scores included inability to

participate in usual social clubs and teams, having the entire household quarantined for a week or longer, and being isolated due to possible exposure. Class 1 comprised more than half of the sample (52.5%) and had moderate probability of exposure across all items. In contrast, Class 2 (5.7%) was differentiated by high probability of exposure across items. Class 3 (10.3%) had moderate probability across items and the highest probability among classes for reporting household quarantine for a week or longer. Class 4 (17.2%) had moderate probability across items with relatively lower probability than Class 1 for being unable to participate in social clubs or activities. Finally, Class 5 (14.4%) had relatively low probability of exposure across items.

Class comparisons. Class 1 was more likely to be 30 years or older than Classes 3, and 5 and to have a child or adolescent living in the home. Class 2 had significantly greater Work Life, Home Life, and Emotional/Physical adverse experiences than all other classes. Class 2 also had the most Social/Isolation experiences, followed by Classes 3, 1, 4, and 5. Class 3 had significantly more adverse Emotional/Physical experiences than Classes 4 and 5. Class 4 had the least positive experiences.

Class 1 was least likely to have a history of non-interpersonal trauma. Class 2 had significantly higher mean PTSD than Class 1, and Classes 2 and 3 had greater depression than Class 4. Class 5 had significantly less perceived social support than Classes 1, 3, and 4.

Emotional/Physical Health and Infection

Classes. The Emotional/Physical Health and Infection LCA had a best-fitting model of 5 classes with 16 indicators. Items with the highest univariate entropy scores included increased mental health and sleep problems, and increased child sleep problems or nightmares. Class 1 (10.4%) had high probability of emotional and physical health problems and the highest probability of experiencing barriers to treatment and dissatisfaction with mental health treatment; however, low probability of child emotional or behavioral problems. Class 2 (10.1%) had the highest probability of child emotional/behavioral problems relative to all other classes. Class 3, representing nearly half of the sample (46.9%), had high probability of mental health and sleep problems and was differentiated from Class 2 by having low probability of child emotional or

sleep problems. Class 4 (23.3%) had low probability of experiencing child emotional or sleep problems, as well as low probability of mental health problems, alcohol and substance use, and barriers to access to treatment; however, had high probability of engaging in less healthy lifestyle habits such as less exercise, more time spent on electronic devices, overeating and eating less healthy food. Class 5 (9.2%) had low probability of exposures across types, except, similar to other classes, had a moderate probability of getting less medical care than usual.

Class comparisons. Classes 4 and 5 were more likely to be 60 years or older than Classes 1, 2, and 3. Class 1 was more likely to be 29 years old or less than Classes 2 and 3. Class 2 was most likely to be living with a partner and to have a child or adolescent in the home, and least likely to live alone. Class 4 was most likely to have a person older than 60 in the home. Class 5 was least likely to be a student.

Classes 1 and 2 had significantly more adverse Work Life and Home Life experiences than all other classes. Class 1 had significantly more Social/Isolation experiences than all other classes. Class 1 also had the most adverse Emotional/Physical experiences compared to all other classes followed by, Classes 2, 3, 4, and 5. Class 2 had significantly more positive experiences than Classes 1 and 4.

Class 1 was most likely to have a history of domestic violence and non-partner violence exposure relative to all other classes and more likely to have a history of childhood trauma than Class 4. Class 1 had significantly greater mean levels of PTSD, depression, and anxiety compared to all other classes. Class 2 had greater PTSD than Classes 3, 4, and 5. Classes 1, 2, and 3 had significantly greater perceived stress than Classes 4 and 5. Classes 2 and 3 had significantly greater depression than Classes 4 and 5.

Positive Change

Classes. The Positive Change LCA had a best-fitting model of 4 classes with 19 indicators. Items with the highest univariate entropy scores included more quality time with family or friends, improved relationships with family/friends, and paying more attention to personal health. Class 1 (20.1%) had high probability of positive experiences across items, except, similar to

other classes, had low probability of endorsing less use of alcohol or substances, less time on screens/devices, and more volunteering. Class 2 (36.7%) had moderate probability of positive experiences across items and was differentiated from Class 1 by lower probability of making new connections with supportive people, developing new hobbies/talents, finding new meaning in work, and being more efficient or productive in work. Class 3 (14.7%) had low probability of positive experiences across types. Class 4 (28.5%) had high probability of being more appreciative of things usually taken for granted, paying more attention to personal health and injury prevention, and donating time or goods to a cause related to the disease.

Class comparisons. Class 4 was least likely to be 60 years or older or to be living with a partner. Class 2 was most likely to have a child or adolescent in the home. Classes 1 and 2 had significantly more Work Life experiences than Classes 3 and 4. Class 2 had significantly more Home Life experiences than all other classes and Class 1 had more experiences in this domain than Classes 3 and 4. Classes 1 and 4 had significantly more Social/Isolation experiences than Classes 2 and 3. Class 1 had significantly more positive experiences than all other classes, followed by Classes 2, 4, and 3.

Classes 1 and 4 were more likely to have a history of non-partner violence than Class 2. Class 1 had greater mean levels of PTSD than all other classes. Class 1 and 2 had greater perceived social support than Class 3.

Discussion

The current findings supported our first hypothesis by demonstrating the utility of the EPII in identifying unique profiles (classes) based on patterns of negative and positive pandemic-related experiences across multiple personal and social domains using a person-centered analytic approach. Four or five classes were identified in each domain as best-fitting solutions. Our second hypothesis, that identified subgroups of individuals assigned to each class would significantly differ on sociodemographic characteristics and indicators of mental health and functioning, was also supported. Most domains had at least 2 classes representing a minority of the sample that emerged as being at highest risk for adverse experiences and outcomes.

According to our 5-class solution of the Work Life Domain, individuals with the highest probability of employment-related adverse experiences during the pandemic (Class 4) had relatively high levels of perceived stress. These individuals were also most likely to be currently employed and to be living with a partner. Individuals with the highest probability of being laid off (Class 3) also reported a high number of negative impacts on social activities and increased isolation. These findings suggest that individuals who report the highest levels of work-related stress constitute two unique groups which may need distinct types of psychosocial services and supports corresponding to experiencing either the combined effects of stressors at work and family responsibilities or the financial stress and social isolation caused by being laid-off. In addition, members of a class characterized by older age and living alone and without a child (Class 5) reported relatively low levels of depression and anxiety but also may benefit from assistance in developing or regaining an involvement in positive activities because they reported the fewest number of positive experiences. Another class characterized by a high probability of working despite close contact with people who might be infected (Class 1) may include “essential” workers in healthcare, social and environmental services, and commercial settings; despite the potential danger involved in their work, members of this class did not report relatively high levels of stress or distress, perhaps in part due to also reporting the highest perceived social support.

In the Home Life domain, the sample was split between a large majority (~80%) who reported relatively few impacts from the pandemic and a minority (~20%) who reported numerous adverse impacts associated with life at home. The two classes that comprised this high-impact subgroup (Classes 1 and 3) were similar in reporting increasing family conflict and a range of traumatic stress and mental health problems, which could put them at risk for significant adversities such as intimate partner or parent-child violence (Boserup, McKenney, & Elkbulli, 2020). However, they also differed in an important respect, with one class (Class 3) also reporting current economic adversity and past trauma exposure. Younger individuals with the highest probability of being a student (Class 1) also reported a relatively high number of adverse

impacts on social life and emotional and physical health. These individuals were also relatively more likely to have a history of childhood trauma and violence exposure in adulthood, and together with individuals in Class 3, had the highest perceived stress, PTSD, depression, and anxiety. These findings are consistent with research highlighting a subgroup of youth and adults who may be at risk for clinically-significant psychosocial impairment during a period of high stress, such as this pandemic, due to the cumulative adverse impact on their home life of prior traumatic victimization or polyvictimization (Dierkhising et al., 2019). Here again, membership in the different classes might indicate a need for different approaches to services, with some families best served by social and family support programs and others needing therapeutic assistance in recovery from past and current trauma as well.

In the Social Activities and Isolation domain, more than half of the sample reported moderate levels of adverse influences on social life and were most likely to be 30 years or older and to be caring for a child or adolescent in the home. These individuals were least likely to have a trauma history and reported relatively few mental health problems. However, Classes 2 and 3, representing 16% of the sample, had the highest impact across domains and appeared to be at greatest risk, with relatively high levels of depression and PTSD. These subgroups included individuals reporting adverse impacts across all domains and past trauma histories (consistent with a polyvictimization formulation; Dierkhising et al., 2019) and others whose adverse experiences were primarily current and likely related to quarantining in the pandemic.

Individuals with the most impact in the Emotional/Physical Health and Infection domain (Classes 1 and 2) appeared to be at greatest risk, with Class 1 most likely to have a history of violence exposure and to have the highest levels of PTSD, depression, and anxiety. Individuals in Class 1 were also likely to be experiencing barriers to treatment and dissatisfaction with current mental health treatment. Individuals in Class 2, who were most likely to be living with a partner and to have a child in the home, also had relatively high levels of perceived stress, depression, and PTSD, despite also reporting more experiences in the Positive Change domain. The latter individuals were also most likely to be struggling with child emotional and behavioral

problems, which reflects the challenges faced by parents needing to juggle work responsibilities with new childcare and schooling demands at home. These findings suggest that mental health and related social services are needed during the pandemic by two relatively distinct sub-groups: individuals with persistent (and potentially polyvictimization-related) mental health problems, and those with similar apparent symptoms that are related to family stressors and parenting children who are experiencing stress or behavioral problems.

Finally, in the Positive Change domain, individuals classified in Classes 1 and 2 represented more than half of the sample and reported the greatest number of positive experiences related to the pandemic; however, they also were relatively more likely than other classes to report adverse experiences in other domains. Individuals in these classes also had relatively high perceived social support. Thus, positive and negative experiences are not mutually exclusive and may interact to shape mental health and family outcomes.

The current study has limitations. Notably, the sample represents a convenience sample recruited through social media advertisements, posting in listservs, and utilization of a research participant database called ResearchMatch.org. As such, the sociodemographic composition of the sample is quite homogenous and not representative of lower income and racially/ethnically diverse populations. It is quite possible that experiences that were low base rate in the current sample may have been more prevalent in a more diverse, under-resourced population. While this is a clear limitation, the value of this preliminary study lies in its capacity to substantiate the EPII's ability to identify meaningful profiles of pandemic-related experiences with linkages to indicators of perceived stress and impairment, even in a non-diverse sample. That said, future research will need to extend these findings to more diverse populations.

Another consideration is that rates of pandemic-related experiences on the EPII may change over time. The current study surveyed individuals during and after peak rates of COVID-19 in the Northeast region. It is possible that response patterns on the EPII may have been different if the sample was surveyed later, as more time passed provides greater opportunity for

these experiences to occur. Ideally, the EPII would be administered at multiple time points across the pandemic so as to track changes in rates of different types of experiences.

Finally, because of the large number of items on the EPII, it was not possible to enter all into an LCA to take into consideration patterns across indicators across domains. The sample size was also not large enough to conduct crosstabulation of classes across domains. However, examining class differences in the number of experiences within each domain provided some information about cross-domain relationships, with individuals classified in high impact classes in one domain likely also to be classified in high impact classes in other domains.

In summary, the current study represents the first to use a person-centered, data-driven approach to characterizing and contextualizing negative and positive experiences of individuals during an unprecedented pandemic crisis. It serves to provide an example of an approach that may be suitable for studying future disasters and public health crises, as well as support a novel instrument for measuring tangible, pandemic-related experiences. More research will be necessary to understand how pandemics such as COVID-19 impact personal and social experiences over time and how patterns and impacts might differ in various populations.

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EPIDEMIC-PANDEMIC IMPACTS INVENTORY

Table 1

Sociodemographic Characteristics

Variable	<i>n</i>	%
State		
Connecticut	294	45.1
Maine	16	2.5
Massachusetts	88	13.5
New Hampshire	18	2.8
New Jersey	50	7.7
New York	132	20.2
Pennsylvania	36	5.5
Rhode Island	9	1.4
Vermont	9	1.4
Age		
18 – 29	103	15.8
30-39	99	15.2
40-49	152	23.3
50-59	154	23.6
60-69	108	16.6
70-79	34	5.2
80-89	2	0.2
Gender		
Female	541	83.0
Male	98	15.0
Non-Binary	9	1.4
Non-disclosed	4	0.6
Hispanic/Latinx	34	5.2
Race		
African American	24	3.7
American Indian or Alaska Native	1	0.2
Asian	18	2.8
Native Hawaiian or Pacific Islander	1	0.2
White	581	89.1
Biracial	14	2.1
Non-disclosed	13	2.0
Education		
High School	23	3.5
Vocational/Trade	8	1.2
Some College	81	12.4
Associates Degree	45	6.9
Bachelor's Degree	212	32.5
Masters	202	31.0
Doctoral or Advanced	80	12.3
Non-disclosed	1	0.2
Insurance		
No Insurance	8	1.2
Medicaid/Medicare	100	15.3
Commercial	520	79.8
Non-disclosed	24	3.7
Annual Household Income		
Less than \$10,000	19	2.9
\$10,000-\$19,999	33	5.1
\$20,000 - \$29,999	26	4

\$30,000 - \$39,999	31	4.8
\$40,000 - \$49,999	26	4
\$50,000 - \$59,999	39	6
\$60,000 - \$69,999	29	4.4
\$70,000 - \$79,999	50	7.7
\$80,000 - \$89,999	35	5.4
\$90,000 - \$99,999	34	5.2
\$100,000 - \$149,999	134	20.6
More than \$150,000	138	21.2
Non-disclosed	58	8.9
Relationship Status		
Long-term relationship	466	71.5
Single	173	26.5
Non-disclosed	13	2.0
Living Arrangement		
Own/rent	575	88.2
Parent/guardian's home	57	8.7
Son or daughter's home	5	0.8
Homeless shelter	5	0.8
Friend or relative's home	7	1.1
Non-disclosed	3	0.5
Lives Alone	80	12.3
Young Child (≤ 12)		
Lives with me	104	16.0
Lives elsewhere	1	0.2
No	547	83.9
Older Child/Adolescent (13-17)		
Lives with me	101	15.5
Lives elsewhere	9	1.4
No	542	83.1
Child older than 18		
Lives with me	114	17.5
Lives elsewhere	155	23.8
No	383	58.7
Adult older than 60 in home	207	31.7
Employment Status		
Full-time	400	61.3
Part-time	66	10.1
Unemployed, laid off, furloughed	107	16.4
Retired	68	10.4
Non-disclosed	11	1.7
Student Status		
Full-time	40	6.1
Part-time	21	3.2
Non-student	556	85.3
Non-disclosed	35	5.4

EPIDEMIC-PANDEMIC IMPACTS INVENTORY

Table 2

Work Life Class Differences

	Class 1		Class 2		Class 3		Class 4		Class 5		χ^2	Class Differences
	Prob	SE	Prob	SE	Prob	SE	Prob	SE	Prob	SE		
Demographics												
Age $\geq$ 60 years	.136	.036	.000	.000	.150	.182	.058	.036	.455	.283	37.13**	C5>C1,C2,C4; C1,C3>C2
Age $\leq$ 29 years	.216	.039	.042	.039	.296	.075	.136	.056	.117	.027	15.10*	C1,C3>C2
Male	.116	.029	.102	.047	.192	.078	.053	.042	.187	.024	10.47*	C5>C4
Racial/Ethnic Minority	.152	.032	.088	.045	.167	.078	.066	.042	.077	.017	5.45	
Living with Partner	.776	.039	.860	.050	.672	.133	.944	.038	.660	.031	41.28**	C4>C1,C5; C2>C5
Lives Alone	.096	.030	.017	.017	.000	.000	.021	.021	.210	.028	72.60**	C1,C2,C3,C4>C5
Child/Adolescent in Home	.274	.058	.880	.062	.084	.059	.711	.111	.003	.006	341.02**	C1,C2,C4>C3,C5; C2>C1
Young Adult Child in Home	.252	.046	.101	.045	.304	.094	.184	.061	.121	.023	14.20*	C1>C5
Person >60 in Home	.226	.038	.100	.045	.470	.203	.105	.075	.438	.062	26.39**	C5>C1,C2,C4
Employed	.863	.032	.913	.047	.491	.146	1.00	.000	.628	.043	184.41**	C4>C1,C3,C5; C2>C3,C5; C1>C5;
Laid off/ Unemployed	.150	.033	.097	.049	.591	.117	.065	.066	.119	.032	29.59**	C3>C1,C2,C4,C5
Student	.149	.034	.096	.049	.242	.080	.064	.053	.056	.015	11.28*	
Trauma Exposure												
Childhood Trauma	.427	.052	.506	.073	.495	.150	.291	.070	.317	.027	11.09*	
Domestic Violence	.184	.054	.195	.085	.382	.109	.219	.079	.200	.024	3.29	
Adult Violence	.196	.048	.203	.065	.362	.113	.150	.078	.198	.028	2.43	
Non-interpersonal	.974	.014	.896	.049	.986	.016	.904	.046	.985	.007	6.77	
	Class 1		Class 2		Class 3		Class 4		Class 5			

	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	χ^2	Class Differences
EPII Domain Totals												
Work Life	4.27	0.12	3.17	0.16	4.43	0.22	6.21	0.21	0.99	0.05	1532**	C4>C1,C2,C3,C5; C1>C2,C5; C2,C3>C5; C3>C2
Home Life	1.65	0.22	3.48	0.30	3.42	0.33	4.17	0.35	0.46	0.06	417.29**	C2,C3,C4>C1,C5; C1>C5
Social/Isolation	7.12	0.32	6.45	0.38	9.29	0.63	7.86	0.53	6.31	0.13	44.09**	C3,C4>C5; C3>C2
Emotional/ Physical	6.46	0.22	7.68	0.36	7.57	0.46	8.54	0.34	6.12	0.15	56.78**	C2,C4>C1; C2,C3,C4>C5
Positive	7.68	0.34	6.67	0.46	8.46	0.62	8.13	0.50	6.52	0.21	18.87*	C1,C3,C4>C5
Psychological Constructs												
PTSD	1.26	0.17	1.34	0.29	2.02	0.44	1.67	0.24	1.18	0.14	4.70	
PSS	22.77	0.38	23.66	0.56	21.26	0.80	23.83	0.42	21.49	0.24	34.09**	C2,C4>C3,C5; C1>C5
PHQ-9	7.78	0.66	8.75	1.11	11.79	1.99	9.72	0.96	6.33	0.74	10.25*	C4>C5
GAD-7	7.46	0.57	9.98	0.88	8.68	1.51	9.01	0.77	5.90	0.49	21.99**	C2,C4>C5
Social Support	22.65	0.53	21.33	0.51	17.86	1.11	20.08	0.70	19.81	0.38	27.35**	C1>C3,C4,C5; C2>C3

Note. Class differences represent pairwise comparisons that are significant at $p<.005$ (Bonferroni adjustment)

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

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Table 3

Home Life Class Differences

	Class 1		Class 2		Class 3		Class 4		χ^2	Class Differences
	Prob	SE	Prob	SE	Prob	SE	Prob	SE		
Demographics										
Age ≥ 60 years	.166	.042	.016	.016	.043	.035	.301	.026	101.81**	C4>C1,C2,C3; C1>C2
Age ≤ 29 years	.344	.056	.076	.034	.028	.028	.133	.021	30.22**	C1>C2,C3,C4; C4>C3
Male	.136	.039	.082	.033	.056	.042	.184	.021	12.28*	C4>C3
Racial/Ethnic Minority	.215	.049	.080	.034	.105	.058	.076	.016	6.68	
Living with Partner	.548	.075	.936	.030	.878	.061	.711	.026	50.58**	C2,C3>C1,C4
Lives Alone	.083	.036	.000	.000	.026	.026	.176	.022	87.36**	C4>C1,C2
Child/Adolescent in Home	.074	.044	.761	.056	.772	.086	.102	.019	279.36**	C2,C3>C1,C4
Young Adult in Home	.199	.057	.127	.052	.110	.065	.184	.024	3.06	
Person >60 in Home	.378	.055	.082	.033	.065	.046	.379	.027	83.21**	C1,C4>C2,C3
Employed	.626	.058	.830	.047	.741	.091	.733	.025	7.82	
Laid off/ Unemployed	.329	.055	.150	.045	.234	.086	.115	.018	13.74*	C1>C4
Student	.298	.065	.089	.041	.038	.045	.059	.013	13.02*	C1>C2,C3,C4
Trauma Exposure										
Childhood Trauma	.563	.077	.377	.062	.484	.106	.314	.025	11.47*	C1>C4
Domestic Violence	.399	.087	.127	.039	.400	.128	.181	.020	10.78*	C1>C2
Adult Violence	.366	.061	.173	.045	.192	.072	.179	.021	8.38*	C1>C4
Non-interpersonal	1.00	0.00	.902	.032	1.00	0.00	.973	.008	20.62**	C1>C2,C4; C3>C2,C4
	Class 1		Class 2		Class 3		Class 4			

	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>		Class Differences
EPII Domain Totals										
Work Life	3.91	0.25	4.35	0.24	4.48	0.37	1.72	0.13	134.95**	C1,C2,C3>C4
Home Life	3.09	0.13	3.30	0.14	6.50	0.19	0.47	0.04	1689.20**	C1,C2,C3>C4; C3>C1,C2
Social/Isolation	8.91	0.36	6.15	0.20	8.63	0.62	6.36	0.13	60.15**	C1,C3>C2,C4
Emotional/ Physical	8.46	0.23	7.17	0.31	9.57	0.41	5.76	0.12	167.29**	C3>C1,C2,C4; C1>C2,C4; C2>C4
Positive	7.96	0.43	7.67	0.43	7.69	0.66	6.71	0.19	9.37*	
Psychological Constructs										
PTSD ^{dcon}	2.29	0.15	1.10	0.14	2.47	0.30	0.99	0.07	77.74**	C1,C3>C2,C4
PSS	24.06	0.45	22.29	0.47	24.94	0.55	21.27	0.21	59.13**	C1,C3>C2,C4
PHQ-9	13.81	0.73	5.76	0.68	12.54	1.16	5.75	0.34	111.81**	C1,C3>C2,C4
GAD-7	12.47	0.83	7.66	0.80	10.53	0.94	4.97	0.48	51.62**	C1,C3>C2,C4
Social Support	17.89	1.17	22.60	1.16	18.62	1.09	20.80	0.54	9.19*	C2>C1

Note. Employed DCON for PTSD due to non-convergence with DU3STEP or DE3STEP commands. Class differences represent pairwise comparisons that are significant at $p < .008$ (Bonferroni adjustment).

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

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Table 4

Social Activities and Isolation Class Differences

	Class 1		Class 2		Class 3		Class 4		Class 5		χ^2	Class Differences
	Prob	SE	Prob	SE	Prob	SE	Prob	SE	Prob	SE		
Demographics												
Age ≥ 60 years	.253	.035	.265	.134	.120	.139	.289	.080	.142	.054	2.54	
Age ≤ 29 years	.076	.020	.139	.070	.331	.070	.211	.050	.228	.050	24.03**	C3,C5>C1
Male	.183	.025	.156	.068	.083	.041	.173	.043	.097	.041	5.48	
Racial/Ethnic Minority	.079	.023	.202	.072	.087	.066	.055	.038	.183	.053	4.97	
Living with Partner	.778	.038	.662	.088	.680	.081	.796	.050	.598	.063	6.31	
Single Adult	.151	.023	.112	.055	.118	.054	.179	.044	.108	.037	1.71	
Lives Alone	.128	.021	.084	.049	.080	.046	.174	.044	.106	.037	2.81	
Any Child in Home	.379	.037	.197	.073	.172	.054	.108	.042	.135	.064	33.11**	C1>C4,C5
Young Adult in Home	.214	.028	.263	.084	.086	.082	.046	.028	.195	.056	25.07**	C1>C4
Person >60 in Home	.296	.034	.502	.090	.211	.098	.332	.056	.337	.074	6.65	
Employed	.761	.027	.518	.096	.685	.067	.734	.052	.719	.060	6.51	
Laid off/ Unemployed	.142	.022	.397	.092	.259	.062	.119	.038	.149	.042	11.34*	C2>C4
Student	.103	.020	.154	.069	.147	.054	.057	.030	.080	.035	4.17	
Trauma Exposure												
Childhood Trauma	.322	.030	.579	.092	.513	.072	.295	.053	.426	.058	13.76*	
Domestic Violence	.186	.026	.386	.086	.292	.063	.176	.057	.246	.059	6.84	
Adult Violence	.193	.026	.412	.096	.287	.081	.229	.051	.142	.043	9.71*	
Non-interpersonal	.962	.013	1.00	0.00	1.00	0.00	.950	.023	.974	.024	19.76*	C2,C3>C1

	Class 1		Class 2		Class 3		Class 4		Class 5		χ^2	Class Differences
	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>		
EPII Domain Totals												
Work Life	2.84	0.16	4.51	0.43	2.88	0.32	2.13	0.29	2.05	0.47	32.86**	C2>C1,C3,C4,C5
Home Life ^{dcon}	1.64	0.11	3.12	0.32	1.85	0.28	1.25	0.16	1.39	0.16	30.56**	C2>C1,C3,C4,C5
Social/Isolation	7.06	0.08	12.84	0.28	9.64	0.23	5.69	0.15	4.04	0.13	1161.36**	C2>C1,C3,C4,C5; C3>C1,C4,C5; C1>C4,C5; C4>C5
Emotional/ Physical	6.64	0.16	9.18	0.43	7.48	0.35	5.90	0.28	6.14	0.31	52.57**	C2>C1,C3,C4,C5; C3>C4,C5
Positive	7.32	0.22	8.59	0.62	8.24	0.54	5.86	0.33	6.54	0.41	29.87**	C1,C2,C3>C4
Psychological Constructs												
PTSD	1.27	0.17	2.29	0.31	1.53	0.28	1.27	0.33	1.18	0.58	11.37*	C2>C1
PSS	21.94	0.25	23.77	0.78	23.06	0.54	22.00	0.50	21.72	0.42	9.33	
PHQ-9	6.76	0.69	10.46	1.22	9.82	1.09	5.64	0.74	9.71	1.25	15.94*	C2,C3>C4
GAD-7	6.75	0.43	8.81	0.96	9.33	0.88	7.42	0.82	6.29	1.14	11.27*	
Social Support ^{dcon}	20.45	0.26	19.68	0.80	21.06	0.50	21.31	0.42	19.24	0.46	13.38*	C1,C3,C4>C5

Note. Employed DCON for social support and home life totals due to non-convergence with DU3STEP or DE3STEP commands. Class differences represent pairwise comparisons that are significant at $p<.005$ (Bonferroni adjustment).

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

EPIDEMIC-PANDEMIC IMPACTS INVENTORY

Table 5

Emotional/Physical Health and Infection Class Differences

	Class 1		Class 2		Class 3		Class 4		Class 5		χ^2	Class Differences
	Prob	SE	Prob	SE	Prob	SE	Prob	SE	Prob	SE		
Demographics												
Age ≥ 60 years	.078	.042	.030	.021	.200	.028	.352	.043	.340	.072	70.75**	C4,C5>C1,C2,C3
Age ≤ 29 years	.241	.067	.207	.031	.207	.031	.114	.028	.103	.044	36.62**	C1>C2,C3
Male	.117	.045	.120	.042	.134	.021	.212	.036	.168	.053	4.70	
Racial/Ethnic Minority	.129	.045	.076	.034	.117	.021	.107	.029	.034	.025	8.31	
Living with Partner	.615	.064	.895	.051	.724	.030	.714	.040	.779	.060	13.05*	C2>C1,C3
Single Adult	.159	.050	.077	.040	.117	.023	.193	.034	.152	.051	5.33	
Lives Alone	.129	.043	.000	.000	.115	.022	.167	.032	.151	.051	91.50**	C1,C3,C4,C5>C2
Child/adolescent in Home	.245	.067	.730	.072	.203	.031	.216	.040	.185	.069	51.70**	C2>C1,C3,C4,C5
Young Adult in Home	.157	.053	.232	.055	.157	.024	.215	.035	.101	.044	5.48	
Person >60 in Home	.191	.061	.116	.041	.319	.029	.464	.053	.313	.069	34.33**	C4>C1,C2; C3>C2
Employed	.620	.067	.805	.055	.741	.028	.756	.038	.615	.093	6.07	
Laid off/ Unemployed	.295	.065	.173	.051	.154	.023	.124	.029	.186	.063	6.25	
Student	.141	.047	.097	.039	.125	.020	.062	.025	.000	.000	69.55**	C1,C3>C5
Trauma Exposure												
Childhood Trauma	.567	.076	.413	.066	.370	.033	.250	.037	.452	.072	18.20*	C1>C4
Domestic Violence	.457	.073	.176	.057	.237	.029	.129	.030	.148	.056	22.18	C1>C2,C3,C4,C5
Adult Violence	.513	.067	.101	.047	.183	.026	.155	.032	.243	.065	27.02	C1>C2,C3,C4,C5
Non-interpersonal	.972	.021	.938	.030	.983	.009	.952	.018	.984	.017	3.98	

	Class 1		Class 2		Class 3		Class 4		Class 5		χ^2	Class Differences
	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>		
EPII Domain Totals												
Work Life	4.00	0.31	3.91	0.28	2.60	0.14	1.99	0.17	2.21	0.34	58.01**	C1,C2>C3,C4,C5; C3>C5
Home Life	3.63	0.32	3.88	0.30	1.66	0.14	0.43	0.10	0.47	0.21	286.82**	C1,C2>C3,C4,C5; C3>C4,C5
Social/Isolation	9.36	0.45	6.47	0.27	6.94	0.16	6.48	0.23	5.88	0.27	49.34**	C1>C2,C3,C4,C5; C3>C5
Emotional/ Physical	10.90	0.22	8.61	0.22	7.20	0.09	4.85	0.12	2.36	0.23	1080.15**	C1>C2,C3,C4,C5; C2>C3,C4,C5; C3>C4,C5; C4>C5
Positive	6.58	0.50	8.46	0.43	7.28	0.20	6.58	0.33	7.16	0.60	13.50*	C2>C1,C4
Psychological Constructs												
PTSD ^{dcon}	2.72	0.19	1.70	0.20	1.52	0.09	0.52	0.07	0.81	0.16	175.34**	C1>C2,C3,C4,C5; C2>C3,C4,C5; C3>C5
PSS	24.14	0.53	23.25	0.48	23.21	0.23	19.67	0.30	20.34	0.55	123.88**	C1,C2,C3>C4,C5
PHQ-9	14.60	1.00	8.40	1.21	9.34	0.37	3.39	0.36	2.58	0.60	347.71**	C1>C2,C3,C4,C5; C2,C3>C4,C5;
GAD-7	12.24	0.80	8.66	0.69	9.01	0.39	2.48	0.26	3.67	2.47	387.51**	C1>C2,C3,C4,C5; C2,C3>C4
Social Support	18.28	0.76	20.50	0.63	19.99	0.36	21.56	0.44	21.17	0.78	19.21*	

Note. Employed DCON for PTSD due to non-convergence with DU3STEP or DE3STEP commands. Class differences represent pairwise comparisons that are significant at $p<.005$ (Bonferroni adjustment).

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

EPIDEMIC-PANDEMIC IMPACTS INVENTORY

Table 6

Positive Change Class Differences

	Class 1		Class 2		Class 3		Class 4		χ^2	Class Differences
	Prob	SE	Prob	SE	Prob	SE	Prob	SE		
Demographics										
Age $\geq$ 60 years	.156	.041	.105	.036	.227	.059	.398	.052	22.71*	C4>C1,C2
Age $\leq$ 29 years	.158	.050	.064	.079	.133	.043	.252	.059	2.92	
Male	.076	.028	.131	.029	.234	.056	.197	.038	11.68*	
Racial/Ethnic Minority	.170	.044	.065	.034	.087	.034	.113	.037	3.37	
Living with Partner	.827	.086	.983	.016	.651	.113	.261	.123	95.09**	C1,C2,C3>C4; C2>C3
Single Adult	.080	.049	.085	.033	.167	.050	.248	.052	7.99	
Lives Alone	.061	.064	.036	.035	.147	.047	.261	.055	12.75*	C4>C2
Child/Adolescent in Home	.307	.096	.691	.069	.239	.057	.031	.011	149.96**	C2>C1,C3,C4; C1>C4
Young Adult in Home	.212	.048	.255	.063	.138	.045	.079	.033	8.86*	
Person >60 in Home	.298	.050	.171	.066	.305	.060	.474	.051	10.92*	C4>C2
Employed	.767	.048	.834	.049	.755	.062	.556	.065	10.54*	C2>C4
Laid off/Unemployed	.157	.038	.165	.032	.125	.043	.198	.040	1.28	
Student	.103	.032	.078	.024	.104	.041	.120	.032	1.02	
Trauma Exposure										
Childhood Trauma	.501	.056	.303	.039	.313	.059	.407	.048	8.59*	
Domestic Violence	.273	.047	.158	.031	.149	.045	.308	.051	7.89*	
Adult Violence	.325	.058	.087	.028	.251	.058	.275	.043	25.54**	C1,C4>C2
Non-interpersonal	.979	.014	.944	.019	.995	.016	.980	.015	3.46	

	Class 1		Class 2		Class 3		Class 4			
	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	χ^2	Class Differences
EPII Domain Totals										
Work Life ^{dcon}	3.55	0.19	3.25	0.14	2.09	0.19	1.77	0.12	98.56**	C1,C2>C3,C4
Home Life ^{dcon}	1.90	0.17	2.71	0.18	1.10	0.15	1.13	0.09	74.65**	C2>C1,C3,C4; C1>C3,C4,
Social/Isolation	8.11	0.34	6.12	0.22	6.25	0.27	7.52	0.29	31.94**	C1,C4>C2,C3
Emotional/ Physical	6.66	0.28	6.99	0.20	6.58	0.34	6.33	0.25	3.80	
Positive	12.13	0.16	7.48	0.13	2.22	0.14	5.53	0.16	2263.23**	C1>C2,C3,C4; C2>C3,C4; C4>C3
Psychological Constructs										
PTSD ^{dcon}	1.86	0.15	1.03	0.09	1.17	0.15	1.44	0.12	24.70**	C1>C2,C3,C4
PSS	22.84	0.44	22.26	0.32	21.21	0.49	21.97	0.36	6.73	
PHQ-9	7.37	1.13	6.72	1.08	7.90	1.00	9.24	0.97	3.02	
GAD-7	7.61	0.80	6.46	0.94	7.19	0.86	7.72	0.84	0.63	
Social Support ^{dcon}	21.27	0.35	21.63	0.25	17.70	0.58	19.35	0.36	57.52**	C1,C2>C3

Note. Employed DCON for PTSD, social support, work life totals, and home life totals due to non-convergence with DU3STEP or DE3STEP commands. Class differences represent pairwise comparisons that are significant at $p<.008$ (Bonferroni adjustment)

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

EPIDEMIC-PANDEMIC IMPACTS INVENTORY

Figure 1.

Work Life LCA

Note. EPII-1, Laid off from job or had to close own business, EPII-2, Reduced work hours or furloughed, EPII-3, Had to lay-off or furlough employees or people supervised, EPII-4, Had to continue to work even though in close contact w/ people who might be infected, EPII-5, A lot of time disinfecting home b/c close contact w/ people infected at work, EPII-6, Increase in workload or work responsibilities, EPII-7, Hard time doing job well b/c of needing to take care of people in home, EPII-8, Hard time making the transition to working from home, EPII-9, Provided direct care to people with the disease, EPII-10, Provided supportive care to people with the disease, EPII-12, Adult unable to go to school or training for weeks or had to withdraw

EPIDEMIC-PANDEMIC IMPACTS INVENTORY

Figure 2.

Home Life LCA

Note. EPII-13, Had a child in home who could not go to school, EPII-14, Childcare or babysitting unavailable when needed, EPII-15, Difficulty taking care of children in the home, EPII-16, More conflict with child or harsher in disciplining child or children, EPII-17, Had to take over teaching or instructing a child, EPII-18, Family or friends had to move into your home, EPII-19, Had to spend a lot more time taking care of a family member, EPII-22, Increase in verbal arguments or conflict with a partner or spouse, EPII-24, Increase in verbal arguments or conflict with other adult(s) in home, EPII-37, Unable to get enough food or healthy food, EPII-39, Unable to pay important bills like rent or utilities, EPII-40, Difficulty getting places due to less access to public transportation or concerns about safety, EPII-41, Unable to get needed medications (e.g., prescriptions or over-the-counter)

Figure 3.

Social Activities and Isolation LCA

Note. EPII-27, Separated from family or close friends, EPII-28, Did not have the ability or resources to talk to family or friends while separated, EPII-29, Unable to visit loved one in a care facility (e.g., nursing home, group home), EPII-30, Family celebrations cancelled or restricted, EPII-31, Planned travel or vacations cancelled, EPII-32, Religious or spiritual activities cancelled or restricted, EPII-33, Unable to be with a close family member in critical condition, EPII-34, Unable to attend in-person funeral or religious services for a family member or friend who died, EPII-35, Unable to participate in social clubs, sports teams, or usual volunteer activities, EPII-36, Unable to do enjoyable activities or hobbies, EPII-58, Isolated or quarantined due to possible exposure to this disease, EPII-59, Isolated or quarantined due to symptoms of this disease, EPII-60, Isolated due to existing health conditions that increase risk of infection or disease, EPII-61, Limited physical closeness with child or loved one due to concerns of infection, EPII-63, Close family member not in the home was quarantined, EPII-64, Family member was unable to return home due to quarantine or travel restrictions, EPII-65, Entire household was quarantined for a week or longer.

EPIDEMIC-PANDEMIC IMPACTS INVENTORY

Figure 4.

Emotional/Physical Health and Infection LCA

Note. EPII-42, Increase in child behavioral or emotional problems, EPII-43, Increase in child's sleep difficulties or nightmares, EPII-44, Increase in mental health problems or symptoms (e.g., mood, anxiety, stress), EPII-45, Increase in sleep problems or poor sleep quality, EPII-46, Increase in use of alcohol or substances, EPII-47, Unable to access mental health treatment or therapy, EPII-48, Not satisfied with changes in mental health treatment or therapy, EPII-49, Spent more time on screens and devices (e.g., looking at phone, playing video games, watching TV), EPII-50, Increase in health problems not related to this disease, EPII-51, Less physical activity or exercise, EPII-52, Overeating or eating more unhealthy foods (e.g., junk food), EPII-53, More time sitting down or being sedentary, EPII-54, Important medical procedure cancelled (e.g., surgery), EPII-56, Got less medical care than usual (e.g., routine or preventive care appointments), EPII-57, Elderly or disabled family member not in the home unable to get the help they need, EPII-68, Had symptoms of this disease but never tested.

EPIDEMIC-PANDEMIC IMPACTS INVENTORY

Figure 5.

Positive Change LCA

Note. EPII-74, More quality time with family or friends in person or from a distance (e.g., on the phone, Email, social media, video conferencing, online gaming), EPII-75, More quality time with partner or spouse, EPII-76, More quality time with children, EPII-77, Improved relationships with family or friends, EPII-78, New connections made with supportive people, EPII-79, Increase in exercise or physical activity, EPII-80, More time in nature or being outdoors, EPII-81, More time doing enjoyable activities (e.g., reading books, puzzles), EPII-82, Developed new hobbies or activities, EPII-83, More appreciative of things usually taken for granted, EPII-84, Paid more attention to personal health, EPII-85, Paid more attention to preventing physical injuries, EPII-86, Ate healthier foods, EPII-87, Less use of alcohol or substances, EPII-88, Spent less time on screens or devices outside of work hours (e.g., looking at phone, playing video games, watching TV), EPII-89, Volunteered time to help people in need, EPII-90, Donated time or goods to a cause related to this disease (e.g., made masks, donated blood, volunteered), EPII-91, Found greater meaning in work, employment, or school, EPII-92, More efficient or productive in work, employment, or school.

EPIDEMIC-PANDEMIC IMPACTS INVENTORY

SUPPLEMENTAL MATERIALS

EPIDEMIC-PANDEMIC IMPACTS INVENTORY

Supplemental Table 1

Percent Endorsement on EPII Items

		Yes Me	Yes Other	Either	Both
1	Laid off from job or had to close own business	7.7	10.1	16.0	1.8
2	Reduced work hours or furloughed	15.8	18.7	30.8	3.7
3	Had to lay-off or furlough employees or people supervised	2.9	4.6	7.2	0.3
4	Had to continue to work even though in close contact with people who might be infected	21.0	19.2	34.8	5.4
5	A lot of time disinfecting at home due to close contact with people who might be infected at work	25.9	13.8	32.4	7.4
6	Increase in workload or work responsibilities	28.5	16.3	38.7	6.1
7	Hard time doing job well because of needing to take care of people in the home.	16.1	6.6	18.4	4.3
8	Hard time making the transition to working from home	26.8	13.5	34.5	5.8
9	Provided direct care to people with the disease	6.3	3.2	8.7	0.8
10	Provided supportive care to people with the disease	11.7	3.8	14.1	1.4
11	Provided care to people who died as a result of the disease*	3.1	2.0	4.8	0.3
12	Had a child in home who could not go to school	23.2	20.6	33.0	10.7
13	Adult unable to go to school or training for weeks or had to withdraw	5.7	8.6	13.3	0.9
14	Childcare or babysitting unavailable when needed	10.6	7.5	11.5	6.6
15	Difficulty taking care of children in the home	11.0	7.8	12.3	6.6
16	More conflict with child or harsher in disciplining child or children	10.4	8.7	13.2	6.0
17	Had to take over teaching or instructing a child	18.9	8.1	20.7	6.3
18	Family or friends had to move into your home	4.3	4.6	7.5	1.4
19	Had to spend a lot more time taking care of a family member.	16.1	6.7	19.2	3.7
20	Had to move or relocate*	3.4	2.0	4.6	0.8
21	Became homeless*	0.0	0.3	0.3	0.0
22	Increase in verbal arguments or conflict with a partner or spouse	17.5	11.5	20.1	8.9
23	Increase in physical conflict with a partner or spouse*	1.1	0.6	1.2	0.5
24	Increase in verbal arguments or conflict with other adult(s) in home	11.2	7.4	13.0	5.5
25	Increase in physical conflict with other adult(s) in home*	0.5	0.5	0.6	0.3
26	Increase in physical conflict among children in home*	1.8	2.0	3.1	0.8
27	Separated from family or close friends	88.5	60.7	90.2	59.0
28	Did not have the ability or resources to talk to family or friends while separated	10.3	6.0	10.7	5.5
29	Unable to visit loved one in a care facility (e.g., nursing home, group home)	20.4	9.7	22.5	7.5
30	Family celebrations cancelled or restricted	88.7	61.0	90.8	58.9
31	Planned travel or vacations cancelled	78.2	49.7	79.4	48.5
32	Religious or spiritual activities cancelled or restricted	47.7	30.2	51.4	26.5

33	Unable to be with a close family member in critical condition	10.9	6.6	12.4	5.1
34	Unable to attend in-person funeral or religious services for a family member or friend who died	22.1	11.8	24.2	9.7
35	Unable to participate in social clubs, sports teams, or usual volunteer activities	67.6	46.8	73.9	40.5
36	Unable to do enjoyable activities or hobbies	81.4	58.6	85.1	54.9
37	Unable to get enough food or healthy food	9.2	5.2	9.5	4.9
38	Unable to access clean water*	0.5	0.5	0.5	0.5
39	Unable to pay important bills like rent or utilities	6.4	3.1	7.2	2.3
40	Difficulty getting places due to less access to public transportation or concerns about safety	14.6	7.1	16.1	5.5
41	Unable to get needed medications (e.g., prescriptions or over-the-counter)	5.5	2.1	6.1	1.5
42	Increase in child behavioral or emotional problems ^a			16.1	
43	Increase in child's sleep difficulties or nightmares ^a			12.9	
44	Increase in mental health problems or symptoms (e.g., mood, anxiety, stress)	61.3	35.9	69.8	27.5
45	Increase in sleep problems or poor sleep quality	58.6	31.0	66.3	23.3
46	Increase in use of alcohol or substances	26.2	17.9	32.7	11.5
47	Unable to access mental health treatment or therapy	8.6	6.3	12.1	2.8
48	Not satisfied with changes in mental health treatment or therapy	10.9	4.9	13.7	2.1
49	Spent more time on screens and devices (e.g., looking at phone, video games, watching TV)	82.4	59.4	87.3	54.4
50	Increase in health problems not related to this disease	15.8	9.4	21.3	3.8
51	Less physical activity or exercise	64.0	40.2	69.8	34.4
52	Overeating or eating more unhealthy foods (e.g., junk food)	62.0	41.3	66.7	36.5
53	More time sitting down or being sedentary	83.6	54.1	87.6	50.2
54	Important medical procedure cancelled (e.g., surgery)	11.5	6.9	17.3	1.1
55	Unable to access medical care for a serious condition (e.g., dialysis, chemotherapy)*	2.5	1.4	3.7	0.2
56	Got less medical care than usual (e.g., routine or preventive care appointments)	58.9	36.5	66.7	28.7
57	Elderly or disabled family member not in the home unable to get the help they need	6.6	3.8	9.0	1.4
58	Isolated or quarantined due to possible exposure to this disease	28.2	18.3	30.5	16.0
59	Isolated or quarantined due to symptoms of this disease	8.9	5.1	10.4	3.5
60	Isolated due to existing health conditions that increase risk of infection or disease	24.7	18.4	33.9	9.2
61	Limited physical closeness with child or loved one due to concerns of infection	43.1	26.4	44.6	24.8
62	Moved out or lived away from family due to a high-risk job*	2.8	1.4	3.5	0.6
63	Close family member not in the home was quarantined	13.3	6.6	14.9	5.1
64	Family member was unable to return home due to quarantine or travel restrictions	5.2	2.9	6.4	1.7
65	Entire household was quarantined for a week or longer ^a			13.3	
66	Currently have symptoms of this disease but have not been tested*	1.8	1.4	2.8	0.5
67	Tested and currently have this disease*	0.5	0.3	0.6	0.2
68	Had symptoms of this disease but never tested	14.7	8.4	18.1	5.1

69	Tested positive for this disease but no longer have it*	1.1	0.5	1.4	0.2
70	Got medical treatment due to severe symptoms of this disease*	2.1	0.6	2.6	0.2
71	Hospital stay due to this disease*	0.3	0.2	0.5	0.0
72	Someone died of this disease while in our home*	0.0	0.2	0.2	0.0
73	Death of close friend or family member from this disease*	4.6	3.1	4.9	2.8
74	More quality time with family or friends in person or from a distance	63.8	42.8	67.2	39.4
75	More quality time with partner or spouse	49.7	37.1	51.1	35.7
76	More quality time with children	34.2	22.2	36.2	20.2
77	Improved relationships with family or friends	35.3	17.9	35.7	17.5
78	New connections made with supportive people	21.3	7.8	22.4	6.7
79	Increase in exercise or physical activity	23.2	12.4	27.0	8.6
80	More time in nature or being outdoors	42.0	23.3	45.2	20.1
81	More time doing enjoyable activities (e.g., reading books, puzzles)	54.0	29.3	57.4	25.9
82	Developed new hobbies or activities	25.2	12.4	28.8	8.7
83	More appreciative of things usually taken for granted	80.5	36.8	81.3	36.0
84	Paid more attention to personal health	52.3	25.8	54.3	23.8
85	Paid more attention to preventing physical injuries	39.7	19.3	41.4	17.6
86	Ate healthier foods	32.1	16.7	33.3	15.5
87	Less use of alcohol or substances	11.8	4.0	12.7	3.1
88	Spent less time on screens or devices outside of work hours	4.4	2.8	5.5	1.7
89	Volunteered time to help people in need	18.3	6.6	19.3	5.5
90	Donated time or goods to a cause related to this disease	31.4	13.0	34.0	10.4
91	Found greater meaning in work, employment, or school	32.1	11.0	33.7	9.4
92	More efficient or productive in work, employment, or school	23.9	8.3	26.1	6.1

Note. ^a Items with only 'Yes,' 'No' or 'N/A' responses. * Items with $\leq 5\%$ base-rate in the 'Either' category. Item wording in some cases is abridged.

EPIDEMIC-PANDEMIC IMPACTS INVENTORY

Supplemental Table 2

Fit Statistics and Entropy for Work Life LCA

	Parameters	Log-likelihood	BIC	Adjusted BIC	Entropy	Adjusted LMR p-value
1 Class	11	-3728.1	7527.47	7492.55		
2 Classes	23	-3434.11	7017.27	6944.24	0.796	<.0001
3 Classes	35	-3369.62	6966.03	6854.9	0.830	0.0011
4 Classes	47	-3340.18	6984.93	6835.7	0.830	0.7665
5 Classes	59	-3311.55	7005.41	6818.09	0.848	0.0533
6 Classes	71	-3294.98	7050.04	6824.62	0.791	0.4242
7 Classes	83	-3280.97	7099.78	6836.26	0.806	0.6178

Note. LMR, Lo-Mendell-Rubin test. Bolded text indicates best-fitting model.

Supplemental Table 3

Fit Statistics and Entropy for Home Life LCA

	Parameters	Log-likelihood	BIC	Adjusted BIC	Entropy	Adjusted LMR p-value
1 Class	13	-3202.31	6488.86	6447.58		
2 Classes	27	-2841.91	5858.78	5773.05	0.925	<.0001
3 Classes	41	-2757.7	5781.09	5650.91	0.802	<.0001
4 Classes	55	-2725.58	5807.56	5632.94	0.805	0.0126
5 Classes	69	-2698.59	5844.3	5625.23	0.841	0.0925
6 Classes	83	-2682.25	5902.34	5638.82	0.859	0.1982
7 Classes	97	NI	NI	NI	NI	NI

Note. LMR, Lo-Mendell-Rubin test. Bolded text indicates best-fitting model.

Supplemental Table 4*Fit Statistics and Entropy for Social Activities and Isolation LCA*

	Parameters	Log-likelihood	BIC	Adjusted BIC	Entropy	Adjusted LMR p-value
1 Class	17	-5187.84	10485.84	10431.87		
2 Classes	15	-4953.29	10133.38	10022.26	0.841	0.0001
3 Classes	53	-4894.53	10132.49	9964.22	0.665	0.2944
4 Classes	71	-4838.35	10136.78	9911.35	0.77	0.0754
5 Classes	89	-4805.13	10186.99	9904.42	0.814	0.0014
6 Classes	107	-4776.79	10246.95	9907.22	0.755	0.3789
7 Classes	125	-4753.05	10316.11	9919.24	0.742	0.2367

Note. LMR, Lo-Mendell-Rubin test. Bolded text indicates best-fitting model.

Supplemental Table 4*Fit Statistics and Entropy for Social Activities and Isolation LCA*

	Parameters	Log-likelihood	BIC	Adjusted BIC	Entropy	Adjusted LMR p-value
1 Class	17	-5187.84	10485.84	10431.87		
2 Classes	15	-4953.29	10133.38	10022.26	0.841	0.0001
3 Classes	53	-4894.53	10132.49	9964.22	0.665	0.2944
4 Classes	71	-4838.35	10136.78	9911.35	0.77	0.0754
5 Classes	89	-4805.13	10186.99	9904.42	0.814	0.0014
6 Classes	107	-4776.79	10246.95	9907.22	0.755	0.3789
7 Classes	125	-4753.05	10316.11	9919.24	0.742	0.2367

Note. LMR, Lo-Mendell-Rubin test. Bolded text indicates best-fitting model.

Supplemental Table 5*Fit Statistics and Entropy for Emotional/Physical Health and Infection LCA*

	Parameters	Log-likelihood	BIC	Adjusted BIC	Entropy	Adjusted LMR p-value
1 Class	16	-5134.14	10371.96	10321.16		
2 Classes	33	-4867.83	9949.51	9844.74	0.679	<.0001
3 Classes	50	-4771.91	9867.82	9709.07	0.733	0.3240
4 Classes	67	-4689.12	9812.45	9599.69	0.818	0.0030
5 Classes	84	-4620.71	9785.74	9519.05	0.862	0.0170
6 Classes	101	-4587.91	9830.31	9509.63	0.874	0.1313
7 Classes	118	-4560.43	9885.5	9510.85	0.818	0.1117

Note. LMR, Lo-Mendell-Rubin test. Bolded text indicates best-fitting model.

Supplemental Table 6*Fit Statistics and Entropy for Positive Change LCA*

	Parameters	Log-likelihood	BIC	Adjusted BIC	Entropy	Adjusted LMR p-value
1 Class	19	-7266.54	14656.2	14595.87		
2 Classes	39	-6918.83	14090.39	13966.56	0.703	<.0001
3 Classes	59	-6824.56	-6824.56	13844.12	0.692	0.0634
4 Classes	79	-6758.93	14029.78	13778.95	0.705	0.0130
5 Classes	99	-6712.29	14066.1	13751.78	0.726	0.6609
6 Classes	119	-6668.97	14109.07	13731.25	0.771	0.5905
7 Classes	139	-6629.35	14159.42	13718.1	0.787	0.2120

Note. LMR, Lo-Mendell-Rubin test. Bolded text indicates best-fitting model.

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Supplemental Table 7

Average Posterior Probabilities for LCAs

Classification	Most Likely Latent Class Membership				
	1	2	3	4	5
Work Life					
Class 1	0.927	0.003	0.027	0.000	0.043
Class 2	0.000	0.975	0.025	0.000	0.000
Class 3	0.090	0.038	0.779	0.003	0.090
Class 4	0.000	0.031	0.038	0.931	0.000
Class 5	0.029	0.013	0.042	0.000	0.915
Home Life					
Class 1	0.866	0.023	0.000	0.111	-
Class 2	0.019	0.896	0.046	0.039	-
Class 3	0.000	0.117	0.883	0.000	-
Class 4	0.068	0.019	0.000	0.913	-
Social/Isolation					
Class 1	0.897	0.006	0.027	0.000	0.070
Class 2	0.042	0.932	0.026	0.000	0.000
Class 3	0.071	0.017	0.873	0.009	0.030
Class 4	0.000	0.000	0.016	0.839	0.145
Class 5	0.086	0.000	0.007	0.024	0.883
Emotional/Physical					
Class 1	0.906	0.004	0.089	0.000	0.000
Class 2	0.022	0.971	0.000	0.006	0.002
Class 3	0.024	0.000	0.895	0.070	0.010
Class 4	0.002	0.000	0.032	0.937	0.029
Class 5	0.004	0.001	0.025	0.043	0.927
Positive Change					
Class 1	0.850	0.108	0.000	0.043	-
Class 2	0.058	0.829	0.024	0.090	-
Class 3	0.000	0.049	0.865	0.086	-
Class 4	0.024	0.113	0.046	0.817	-

Note. Bolded cells indicate agreement between most likely latent class membership and classification for refined LCAs.

EPIDEMIC-PANDEMIC IMPACTS INVENTORY

Supplemental Table 8

Item Selection and Univariate Entropy Scores

Work Life	e	Home Life	e	Social/ Isolation	e	Emotional/ Physical	e	Positive Change	e
1	.238	13	.257	27	.213	42	.208	74	.179
2	.224	14	.390	28	.164	43	.315	75	.086
3	.199	15	.440	29	.205	44	.354	76	.123
4	.391	16	.401	30	.228	45	.236	77	.170
5	.341	17	.421	31	.185	46	.159	78	.095
6	.233	18	.273	32	.198	47	.239	79	.089
7	.416	19	.315	33	.237	48	.228	80	.091
8	.218	20	-	34	.194	49	.170	81	.100
9	.229	21	-	35	.391	50	.156	82	.087
10	.250	22	.318	36	.179	51	.195	83	.118
11	-	23	-	58	.259	52	.199	84	.168
12	.232	24	.326	59	.206	53	.226	85	.133
		25	-	60	.176	54	.137	86	.103
		26	-	61	.202	55	-	87	.067
		37	.275	62	-	56	.142	88	.054
		38	-	63	.221	57	.144	89	.070
		39	.271	64	.178	66	-	90	.085
		40	.274	65	.269	67	-	91	.090
		41	.282			68	.129	92	.073
						69	-		
						70	-		
						71	-		
						72	-		
						73	-		

Note. e = Univariate entropy; Higher values reflect greater contribution to class separation.