

\$ZDUHQHV DQG \$WWLWXGH RI 'HQWDO 3UDFW

0XKDPPDG +DPPD~~SH~~HIYD~~Q~~QMXD~~X~~KDPP~~B~~GHKUR~~Q~~IQ:DTD~~V~~VKUDKXUUDP=~~D~~KDU 0HKPRRQ~~X~~XUDW XO \$LQ \$PLQD
5LG~~S~~ZDQ
'HSDUWPHQW RI 2UDO DQG 0D[LOORIDFLDO 6XUJHU\ \$OOLHG +RVSLWDO)DLVDODEDG)DLVDODEDG 3DNL
'HSDUWPHQW RI 2UWKRRGRQLFV \$OOLHG +RVSLWDO)DLVDODEDG)DLVDODEDG 3DNLVWDQ
'HSDUWPHQW RI 2UDO 3DWKRORJ\ 30& 'HQWDO ,QVWLWXWH)DLVDODEDG 0HGLFDO 8QLYHUVLW\)DLVDOD
&RUUHVSRRGLQX~~Q~~~~X~~~~D~~~~X~~~~V~~~~K~~~~R~~~~G~~ +DPPDG 'HSDUWPHQW RI 2UDO DQG 0D[LOORIDFLDO 6XUJHU\ \$OOLHG +RVSL
(PDLO PDOLNKDPPDG #JPDLO FRP
5HFHLYHG~~S~~~~D~~~~M~~~~O~~H \$FFHSWHG~~O~~~~D~~~~D~~~~W~~H 3XEOLVKH~~O~~~~D~~~~D~~~~W~~H
&RS\ULJKW +DPPDG 0 HW DO 7KLV LV DQ RSHQ DFFHVV DUWLFOH GLVWULEXWHG XQGHU WKH WHUPV RI
XVH GLVWULEXWLRQ DQG UHSURGXFWRQ LQ DQ\ PHGLXP SURYLGHG WKH RULJLQDO DXWKRU DQG VRXU

\$EVWUDFW

\$LP7KH SXUSRVH RI WKLW VWXG\ ZDV WR HYDOXDWH WKH DZDUHQHV DQG DW
&29,' ZKLOH SURYLGLQJ GHQWDO WUHDWPHQW

,QWURGXFWLRQ
,QVWLWXWH)DLVDODEDG 0HGLFDO 8QLYHUVLW\)DLVDODEDG

0DWHULDOV DQ~~X~~~~P~~~~H~~~~W~~~~K~~~~R~~~~Q~~~~Q~~DLUH ZDV GHYHORSHG E\ GHQWDO H[SHUW DQG OLW
E\ JRRJOH GRFV 7KH GDWD ZDV FROOHFWHG RQ VSHFLDOO\ GHVLJQHG 3HUIRU
SUDFWLWLRQHUV RI WKH 3XQMDE UHJLRQ DV DFTXLHG IURP 30 '& GDWDEDVH 7K
SUDFWLWLRQHUV IROORZLQJ SUH FKHFN PHDVXUHV DUH DQG WKRVH ZKR V
7KH EHOLHYHG WKDW LW LV RI JURXS % DQG WKRXJKW WKH\ VKRXOG
SDUWLFLSDQWV DJUHHG RQ GHDOLQJ ZLWK RQO\ GHQWDO HPHUJHQFLHV GXUL

&RQFOXV~~S~~~~E~~~~R~~~~Q~~UGLQJ WR WKLW VWXG\ PRV RI WKH GHQWDO SUDFWLWLRQHUV DU
DQG KHDOWK DXWKRULWLHV VKRXOG WDNH DJJUHVVLYH VWHSV LQ HGXFDWLQJ
PDQDJPHQW UHODWHG WR &29,'

.H\ZRUG~~S~~ZDUHQHV 'HQWDO 3UDFWLWLRQHUV \$WWLWXGH &29,'

\$LP

H SXUSRVH RI WKLW VWXG\ ZDV WR HYDOXDWH WKH DZDUHQHV DQG DWLWXGH
RI GHQWDO SUDFWLWLRQHUV WRZDUGV &29,' ZKLOH SURYLGLQJ GHQWDO
WUHDWPHQW

,QWURGXFWLRQ

H QRYHO FRURQD YLUXV WKDW KDV LWV RULJLQ IURP :XKDQ &KLQD ZLWK
LWV~~S~~~~D~~~~W~~~~L~~~~H~~~~Q~~~~W~~ SUHVHQWHG LQ ODVW 'HFHPEHU DQG QRZ KDG EHFRPH D
PDMRU KHDOWK FKDOOHQJH QRW RQO\ IRU FKLQD EXW DOVR IRU DOO WKH FRXQW
DURXQG WKH~~S~~~~Z~~~~R~~~~O~~~~G~~ KHDOWK RUJDQL]DWLRQ RQ -DQXDU\
GHFODUHG WKLW RXWEUHDN DV PDMRU KHDOWK HPHUJHQF\ RI LQWHUQDWLRQD

WR WZR PH]MORV SIURPHGXUH > @ 6W XDG WKUR KRXJK SURRYHLOD W K D W U H V I S D U F K L D L C S G
GHQWDO SUDFWLWLRQHUV DUH PRUH PSURVQIQJWRK H F M S L W D M L R U Z H G L E M I D Z D W G B I C C
LQFUHDVHG OHYHOH R I R S E M I O E R S K K O D V K R I Q V S H F L D O O \ G H V L J Q D I G D 3 R U I W K P D U H J L V
XOWUDVRQLF VFDOHUV DUH XVHG LQ F S P D I F Q D W L R Q Z U W R I Z D W K H U 3 X G M D E W K H L R Q I V
LQ DHURVROV FRQWDLQLQJ EORRG V D H T X B V W L R R Q K D L G H E Z L W G S Y H Q O V D S C H G S O D T H F
F D O F X O X V D Q G U H V W R U D W L Y H P D W H U I D D O L W K X D V L P S B V H G J Z W M K K K H Q K H D O V S U I D F W
L Q I H F W L R Q G X H W R G L U H F W H [S R V - X L H G M V R G V D O H Y Z H E J O R K N D H G G F R R R K I O W C E R G Q G V
> @ SULQFLSDO LQYHVWLFRV R G H Q D I L O V D W Q L Q J

H UDWLRQDOH RI WKL V V X G \ Z D V W R D V V H V V W K H O H Y H O R I D Z D U H Q H V V R I W F
GHQWDO SUDFWLWLRQHUV DERXW & 29, 5 H V X O W V W K H L U D W W L W X G H Z K L O H
SURYLG L Q J G H Q W D O W U H D W P H Q W D Q G W K H X Y D W L R Q V P H Y K R G V W K D W W K H \ D U
D G R S W L Q J W R O L P L W V S U H D G R I L Q I H F W L R Q L Q W K H L U U H V S H F L Y H S U D F W S E H V
W K H P U H V S R Q G H G W K H L U K O S U D F W S E H V
TXHVWLRQQDLUH Z D V W L R Q Q D L U H \ F R Q Q L V
TXHVWLRQV RXW R I Z K L F K I R X U W H H Q Z
R O H T X H V W L R Q Z D Y R I P X O W U S D X H G K H F D

ODWHULDOV DQG OHWKRGV
\$VH V H H N L Q J D S S U R Y D O I U R P (5 & W K H T X H V W L R Q D J H Y R U W K H U H V S H F L Y H G D U H J L Y
E \ D W H D P R I G H Q W D O H [S H U W V D D V G R L Q U H F W L R Q F R Q W U R O V S H F L D O L V W V

4XHVWLRQV

]UHTXHQF\ DJH

<HV 1R 1RW VXUH

- 'R \RX WKLQN 'HQWDO WUHDWPHQW FDQ EH SURYLGHG ZKHQ WKH SDWLHQW LV LQ LQFXEDWLRQ SHULRG"
- 'R \RX WKLQN RXU VWDQGDUG GDLO\ SURWRFROV DUH VXIILFLHQW WR FRPEDW &29,' "
- 'R \RX WKLQN LQIHFWLRQ FDQ VSUHDG WKURXJK SXQFWXUH RI VKDUS LQVWUXPHQWV"

H IUHTXHQF\ DQF (SUV 4(G))TP)TJ 7(S)-9(R)22H 8SRFK 157.4 -V6



)LJXUHKRZV WKH IUHTXHQF\ DQG SHUFHQWDJHV RI UHVSQRVHV E\ WKH
GHQWDO SUDFWLWLRQHUV

PHDVXUHV DW WKHLU FOLQLFV DUH ZKLFK LV LQ FRUHVSRQGHQFH ZLWK
UHSRUW RI :+2 &KLQD MRLQW PLVVLRQ RQ FRURQDYLUXV GLVHDVH
3DUWLFLSDQWV ZKR VDLG WKDW SUHRSHUDWLYH RUDO ULQVLQJ UHGXFHV PLFUR
ORDG ZHUH DV SURYHQ E\ 6ZBPLQDWKQ HW DO > @
UHVSRQGHQWV ZKR KDG WDNHQ D IRUPDO FRXUVH UHODWHG WR &29,'
PDQDJHPHQW DUH RQO\ EXW DFFRUGLQJ WR &RXOWKDUG HW DO > @ DOO
WKH KHDOWK FDUH SURIHVVLRQDOV VKRXOG WDNH WKH FRXUVH

\$FFRUGLQJ WR WKLV VWXG\ RQO\ RI WKH SUDFWLWLRQHUV KDG
NQRZOHGJH WKDW FRURQDYLUXV EHORQJHG WR JURXS % DQG ZHUH
IROORZLQJ VWHULOL]DWLRQ SURWRFROV DV RI JURXS \$ > @ RI WKH GHQWL
ZHUH LQ IDYRU WR GHDO ZLWK GHQWDO HPHUJHQFLHV RQO\ DQG RSWHG IRU
H[WUD RUDO UDGLRJUDSKV > @ \$FFRUGLQJ WR WKLV VWXG\ RI WKH
SDUWLFLSDQWV YRWHG WR GHIHU GHQWDO WUHDWPHQW IRU PRQWK IRU DOO W
ZKR UHFRYHUHG IURP &29,' ,Q UHVSRQVH WR WKH ODVW TXHVWLRQ
GHQWLWV VWDWHG WKDW WKH UHGXFHG WKHLU
PLQLXP QXPEHUV WR GHDO ZLWK HPHUJHQF\ SURFHGXUV 0RUHRYHU
DOVR VWDWHG WKDW WKH DUH QRW DOORZLQJ DWWHQGDQWV RI WKH SDWL
WR HQWHU WKH RSHUDWU\ URRP LQ RUGHU WR PDLQWDLQ WKH VRFLDO GLVWDQ
ODMRULW\ RI WKHP ZHUH XVLQJ KDQG GLVLQIHFWDQWV DQG ZHUH
SHUIRUPLQJ GLVLQIHFWDQWV XNUMX ZHUH
IROORZLQJ OLPLWDWLRQV RI ZWKKM SURFHGXUV WKH
ZHUH SHUIRUPLQJ DW WKHLU FOLQLFV DQG WKLV LV D GDWD IURP RQO\ GHQW
SUDFWLWLRQHUV WKXV DGDWD PD\ SUHVHQW

&RQFOXVLRQ

:LWKLQ WKH OLPLWV RI WKLV VWXG\ ZH FRQFOXGHG WKDW PRVW RI WKH GHQW
SUDFWLWLRQHUV ZHUH XQDZDUH RI H[DFW SURWHFWLRQ SURWRFROV RI &29,'
ZKLOH SURYLGLQJ WUHDWPHQW 2QO\ D VPDOO SHUFHQWDJH RI SUDFWLWLRQHUV
WDNLQJ FRXUVHV IRU &29,' +HDOWK DXWKRULWLHV VKRXOG WDNH
DJJUHVVLYH VWHSV LQ HGXFDWLQJ WKH GHQWDO SUDFWLWLRQHUV IRU LQIHFW
FRQWURO PDQDJHPHQW UHODWHG WR &29,'

5HIHUUHQFHV

0HQJ